TELECOMMISSION

Study 7(a)(b)

Regulatory Bodies: Structures and Roles

The Department of Communications

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STUDY 7 (ab)

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C O N T E N T S

Foreword

Terms of Reference

Canadian Transport Commission Brief

Trans-Canada Telephone System Submission

Canadian National - Canadian Pacific Telecommunications Submission

F O R E W O R D

This study, by its nature, had to await the outcome of many of the other studies, and the views of the Project Team were digested and incorporated in Chapter 19 of the Telecommission general report, "Instant World", which was published in April 1971. This material will therefore not be reproduced as a separate report. Annexed hereto are the submissions pertaining to this report from:

Canadian Transport Commission

Trans-Canada Telephone System

Canadian National/Canadian Pacific Telecommunications

In addition to the above groups the Canadian Broadcasting Corporation, the Canadian Overseas Telecommunication Corporation and Quebec Telephones participated in the project team.

TELECOMMISSION STUDY 7 (a)(b)

Regulatory Bodies - Structures and Roles

Terms of Reference

To examine and report on:

1. The existing federal and provincial regulatory structure in Canada, and the inter-relationships of its components.

2. The extent and nature of existing federal and provincial regulatory authority as regards:

   a. the right to establish and operate facilities for telecommunication by any means;

   b. the technical characteristics of telecommunications facilities;

   c. the nature and quality of the services offered;

   d. tariffs, rates of return, and financial settlements for services;

   e. the corporate and financial structure and ownership of the persons regulated;

3. Facilities, services, and aspects of their establishment and operation that are not now subject to regulation.

4. The criteria applied and the methods used in exercising regulatory authority.

5. The merits and defects, in terms of effectiveness, of the existing regulatory structure, criteria and methods in relation to:

   a. services now available;

   b. the effects of anticipated technological and economic developments during the next ten years.

6. The extent and nature of the regulatory authority essential for the most effective development of telecommunications in the public interest, including an examination of the criteria that should be applied and the methods to be used in regulating the several factors set out in paragraphs 2 and 3 above.

7. The options open to the federal Government in devising a new regulatory structure.

CANADIAN TRANSPORT COMMISSION BRIEF TO TELECOMMISSION

STUDY 7(a) (b)

REGULATORY BODIES - STRUCTURES AND ROLES

A. General Comments on the Terms of Reference

The following general comments relate to federal jurisdiction only. The item numbers used are those of the Terms of Reference.

Item 1: It is not understood what is meant by the "inter-relationship of its components". Federally incorporated companies are regulated by the Canadian Transport Commission and provincially incorporated companies are regulated by provincial regulatory bodies. The division of jurisdiction is quite clear and is exercised by the separate regulatory bodies.

Item 2a: The right to establish and operate facilities is conferred by a federal company's Special Act of Incorporation. The correct term is "power" rather than "right". Bell Canada's powers in this regard are set out in subsections (1), (2) and (3) of section 5 of chapter 48 of the Statutes of 1968. The similar powers of the British Columbia Telephone Company are set out in section 16 of chapter 66 of the Statutes of 1916, as amended by section 5 of chapter 36 of the Statutes of 1941. The powers of the Bonaventure and Gaspe Telephone Company Limited are set out in sections 4 and 7 of chapter 86 of the Statutes of 1955. The powers of railway telegraph or telephone companies are set out in sections 372 and 374 of the Railway Act.

Item 2b: The Canadian Transport Commission possesses no regulatory authority over the technical characteristics of telecommunications facilities. It may, of course, "take into consideration the standards, as to efficiency and otherwise, of the apparatus and appliances" of telephone systems or lines involved in an application for a "forced" connection between a federal company and a non-federal company, (see subsection 10 of section 380 of the Railway Act).

Item 2c: The Canadian Transport Commission possesses no regulatory authority over the nature and quality of the services offered.

Item 2d: This will be dealt with in detail later on in this memorandum.

Item 2e: The Canadian Transport Commission possesses no regulatory authority over the corporate structure of a regulated company or over its ownership. It may take the financial structure of a regulatory company into account, but only in relationship to its duty with respect to reasonable rates and charges; free from unjust discrimination or undue preference.

Item 3: As stated below, the jurisdiction of the Canadian Transport Commission is mainly a toll jurisdiction with some limited powers over physical facilities which are also described below. The only facilities or services, the tolls for which are not now subject to regulation, are those covered by sub-section (2) of section 380 of the Railway Act and by Bill C-11, both of which are dealt with later on in this memorandum.

Item 4: Criteria of regulation are set out in section 380 of the Railway Act. The Canadian Transport Commission has a duty to ensure that tolls are just and reasonable, and free from unjust discrimination or undue preference. It has wide discretion as to the methods used. In general, it exercises its regulatory authority by means of regulations published in General Orders and by means of judgments following public hearings, at which all parties may present evidence and argument, all of which is taken into account in the light of its relevance and the circumstances then prevailing. A more detailed description is set out in Section C of this memorandum.

Item 5: The Canadian Transport Commission is a creature of statute. It exercises whatever regulatory authority is conferred on it by Parliament. It is not considered that the Commission should offer any comments on this item.

Item 6: Section D of this memorandum deals with this in terms of general principles and contrasts the jurisdiction exercised by the Commission with that exercised by the Federal Communications Commission of the United States. It is considered preferable to limit regulatory statutes to principles and criteria, leaving the regulatory body free to develop methods of applying those criteria in the light of changing circumstances.

Item 7: The options open to the federal Government, in devising a new regulatory structure, appears to be as follows:

(1) Expansion of the jurisdiction of the Canadian Transport Commission in the field of tle telecommunications; (the President of the Commission, however, has stated his view, on a previous occasion, that a separate regulatory body should be created for this purpose); or

(2) The creation of a new regulatory body to administer a new Telecommunications Act.

The options, as to the kind of jurisdiction to be exercised, either by the Canadian Transport Commission or a new regulatory body, appear to be:

(1) A system of minimum and maximum rate control, with the greatest possible degree of freedom being given to telecommunication companies within these two limites. This would imply a national telecommunications policy similar to the national transportation policy set out in the National Transportation Act. It can be argued that, in the long run, the most effective development of telecommunications in the public interest would take place where management is given maximum freedom within prescribed limits; or

(2) Comprehensive rate regulation, similar to that exercised by the Federal Communication Commission of the United States, with whatever degree of technical regulation is considered necessary to achieve this kind of rate regulation.

It is difficult to delineate more precisely the options open to the federal Government, in the absence of a knowledge of what the national telecommunications policy would be. A prerequisite to the development of optional courses of action is a clearly defined statement of federal Government policy.

B. THE BASIS OF FEDERAL CONSTITUTIONAL JURISDICTION WITH RESPECT TO TELEGRAPHS AND TELEPHONES

1. Basis of Jurisdiction: Federal constitutional jurisdiction over telegraphs and telephones is founded upon head 10 of s. 92 and the final head of s. 91 of the British North America Act.

2. Form of Federal Jurisdiction: Federal jurisdiction can take one, or a combination of, three forms: (a) creation of a telegraph or telephone company by special Act; (b) control over telegraph lines or telephone works or undertakings extending beyond Provincial boundaries or connecting with another Province; and (c) a declaration that a work is for the general advantage of Canada. In the case of the five telegraph and the six telephone companies regulated by the Commission, (see list in Appendix "A" hereto), federal jurisdiction arises either from the fact of federal incorporation as a telegraph or telephone company, or from the power given to railways by Sections 372 and 374 of the Railway Act to construct and operate telegraph and telephone lines upon the railway, and to charge tolls for telegraph and telephone messages. It is of interest to note, however, that two special Acts, (those of The Bell Telephone Company of Canada and of the British Columbia Telephone Company), also declare the works of the companies to be for the general advantage of Canada, (Chapter 95 of the Statutes of 1882, s. 1(4) and Chapter 66 of the Statutes of 1916, s. 2).

C. THE EXTENT TO WHICH FEDERAL JURISDICTION IS CURRENTLY BEING EXERCISED BY THE COMMISSION

1. Summary of Commission's Regulatory Jurisdiction. The extent to which federal jurisdiction is, in fact, being exercised by the Commission depends, of course, upon the regulatory provisions enacted by the Parliament of Canada and conferred upon the Commission. These provisions are contained not only in such statutes as the Railway Act and the Telegraphs Act, but also in the several special Acts of Incorporation. Simply stated, such regulatory provisions are mainly designed to permit an economic or financial control over a corporate entity, rather than economic or technical control over the physical things used by the undertaking.

2. Categories of Regulatory Jurisdiction over Telegraph and Telephone Companies: The Commission's principal jurisdiction is over tolls, with the exception of charges for "the use of telegraph or telephone wires where no toll is charged to the public", (Section 380 (2) of the Railway Act). This exception has been interpreted by the Board of Transport Commissioners to mean charges to an individual customer for the use of telegraph or telephone wires which are not connected for intercommunication with the system by which the company provides service to its customers generally and in respect

of which no other customer pays charges for the use thereof, while set apart for the use of the particular customer. Bill C-11 cancels the exception set out in section 380(2) of the Railway Act.

The exercise of the Commission's toll jurisdiction in dealing with the overall rate structure effectively controls the level of earnings of telegraph and telephone companies under the Commission, since all earnings, including earnings from non-regulated services and dividends received from subsidiary companies, are taken into account.

The Commission's toll jurisdiction covers: (a) Publication, filing, and approval of tariffs of tolls; (b) the classification of messages; (c) unjust discrimination in respect of tolls; (d) justness and reasonableness of tolls; (e) power to suspend postpone, disallow or prescribe tolls and (f) power to order joint tariffs, with connecting companies.

The other jurisdiction conferred on the Commission may be summarized as:

(a) Power to order interconnections with another telegraph or telephone company, and to prescribe terms and conditions for use etc., and to award compensation for use;

(b) The approval of all contracts, agreements and arrangements for interconnection and interchange of traffic; for the division of revenues between connecting companies; or generally in relation to the management working and operation of interconnected systems or lines;

(c) Power to order a discontinuance of interconnection or intercommunication;

(d) Power to approve capital stock issues;

(e) Power to approve sale or disposal of the undertaking, (British Columbia Telephone Co., and Bonaventure and Gaspe Telephone Co. Ltd., only);

(f) Power to approve acquisition of other companies, (B.C. Tel. and B. & G. Tel. only); and

(g) Power to enforce obligation to furnish service under restricted, defined conditions, (Bell Tel. and B. & G. Tel. only);

(h) Powers re physical facilities:

(1) Power to determine the reasonableness of Bell's requirements re attachments to Bell's facilities;

(2) Power to determine heights of wires and condition of poles, to make orders re cutting of trees, etc.;

(3) Power to grant leave to construct outside plant and to fix terms and conditions, where consent of a municipality is refused or is given on terms unacceptable to a company;

(4) Power to order wires placed underground;

(5) Power to authorize taking of additional lands without consent of the owner;

(6) Power to grant permission to a municipality or landowner to construct drainage and lay pipes over, under, etc., telegraph or telephone lines.

(i) Powers with respect to accounting and statistical reporting,

3. The Commission's Role in Exercising Jurisdiction: It has consistently held that its powers are regulative and corrective, and that they are not managerial. Its role is thus to review a regulated company's actions from time to time, either on complaint or on its own motion, and to take whatever corrective action for the future that may be necessary.

4. The Commission's Procedures: The procedures of the Canadian Transport Commission are suited t o its functions. It may act upon an application or complaint, or of its own motion. Quite often, proceedings are commenced by letters or resolutions. Most applications or complaints are disposed of through correspondence, conferences, committee meetings and staff investigations, without the necessity of public hearings. The judgments, orders, regulations or rulings of the Commission and its Committees are published periodically. Appeals against decisions may be taken to the Supreme Court of Canada on Questions of law and jurisdiction, or to the Governor-in-Council in other respects. The Commission may review and change its own decisions.

D. SOME OBSERVATIONS ON THE COMMISSION'S JURISDICTION

1. Problems Arising From the Definition of Words: The effective application of the Commission's jurisdiction to the telecommunications field is limited by the definitions of certain terms used in the Railway Act. These definitions were framed at a time when the present state of the art of telecommunications could not be foreseen. They are as follows:

> Sec. 2 (29) '"telegraph" includes wireless telegraph;
> (30) '"Telegraph toll," or "toll", when used with reference to telegraph, means any toll, rate or charge to be charged by any company to the public, or to any person, for the transmission of messages by telegraph;
> (31) '"telephone toll", or "toll", when used reference to telephone, means any toll rate or charge to be charged by any company to the public, or to any person, for use or lease, of a telephone system or line, or any part thereof, or for the transmission of a message by telephone, or for installation and use or lease of telephone instruments, lines or apparatus, or for any service incidental to a telephone business;'

In this connection, it should be noted that the term "telephone" is restricted by the Interpretation Act, as follows:

> Sec. 37 '..."telegraph" and its derivates .... shall not be deemed to include "telephone" or its derivatives.'

It will be observed from the foregoing definitions that the Commission's jurisdiction is defined largely in terms of tolls. A comparison of the Commission's jurisdiction with that conferred on the Federal Communications Commission of the United States by the Communications Act of 1934 emphasizes the limits of the Commission's toll jurisdiction within the context of the state of the art of telecommunications today.

The jurisdiction of the Federal Communications Commission is defined largely in terms of "instrumentalities, facilities, apparatus and services (among other things the receipt, forwarding and delivery of communications) incidental to such transmission". The definitions of "wire communication" and "radio communication" in the Communications Act of 1934 encompass the transmission of a wide variety of defined intelligence.

By contrast, the Commission's jurisdiction with respect to telegraph tolls appears to be restricted by the definition in Section 2(30) of the Railway Act to tolls "for the transmission of messages by telegraph" and the word "transmit" has been so defined by the Supreme Court of Canada in the Electric Despatch Company Case, (20 SCR 83), as to exclude a telephone or telegraph Company from the action of transmission. It further appears that the definition of telephone toll, (Section 2, (31) of the Railway Act), is restricted by the phrase "when used with reference to telephone", and by other references to "telephones". Although the term "telegraphs" has been held to include "telephones", in a decision of the Judicial Committee of the Imperial Privy Council In re Regulation and Control of Radio Communication in Canada, (AC 1932, p.304 and p.308) such a decision appears to conflict with Section 37 of the Interpretation Act quoted above. In this case, it was held that the word "telegraphs" could not be extended to include "radio communications", although it was held that "radio communication" came within the scope of the word "telegraphs". This appeal case describes the original meaning of the word "telegraphs", on page 316 of the report.

It is of interest to note that at the time of the Radio Case, referred to above, that the Trans-Canada Telephone System came into being, the first through messages being transmitted on August 1, 1931, with the official opening taking place on January 5, 1932.

Appendix "A"

TELEGRAPH AND TELEPHONE

COMPANIES SUBJECT TO

COMMISSION'S JURISDICTION

The following five telegraph companies are subject to federal jurisdiction:

(1) Canadian National Telecommunications;

(2) Canadian Pacific Railway Company, Telecommunications Department;

(3) Ontario Northland Transportation Commission;

(jurisdiction is exercised because a component company, the Nipissing Central Railway Company, operates a telegraph service connecting Ontario and Quebec and the said component company has federal incorporation;

(4) Quebec North Shore and Labrador Railway Company; and

(5) The Algoma Central and Hudson Bay Railway Company; (federal incorporation).

The following six telephone companies are subject to federal jurisdiction:

(1) The Bell Telephone Company of Canada;

(2) British Columbia Telephone Company;

(3) Canadian National Telecommunications;

(4) Quebec North Shore and Labrador Railway Company (Telecommunications service);

(5) Ontario Northland Transportation Commission, (a federally incorporated component, the Nipissing Central Railway Company, operates long distance circuits only, connecting Ontario and Quebec);

(6) The Bonaventure and Gaspe Telephone Company Limited.

TELECOMMISSION

STUDY 7 (ab)

REGULATORY BODIES

STRUCTURES AND ROLES

SUBMITTED BY

TRANS-CANADA TELEPHONE SYSTEM

SEPTEMBER 1970

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1. INTRODUCTION

This submission should be read in the light of other memoranda which have been submitted by the Trans-Canada Telephone System (TCTS) to the Telecommission. In particular, reference should be made to the submissions of TCTS in connection with the following Telecommission Studies:-

1 (a) "Analysis of the Constitutional and Legal Basis for the Regulation of Telecommunications"

1 (b) "History of Regulation and Current Regulatory Setting"

1 (c) "Concept of a Telecommunications Carrier"

7 (c) "Relationship between the Department of Communications and the Telecommunications Carriers."

8 (a) "Problems relating to the Regulation of Private Services"

8 (b) ii "Interconnection between the Two Major Competing Common Carrier Organizations"

It should be noted that, for the purposes of this memorandum the field of broadcasting has been excluded from "Telecommunications".

2. GENERAL REMARKS ON THE PRESENT SYSTEM

Terms of Reference

The Trans-Canada Telephone System (TCTS) has been invited to submit a memorandum to the Telecommission on Sections 5 and 6 of the Terms of Reference of Study 7 (ab). Sections 5 and 6 are worded as follows:

"5. The merits and defects, in terms of effectiveness, of the existing regulatory structure, criteria and methods in relation to:

a. services now available

b. the effect of anticipated technological and economic developments during the next ten years.

6. The extent and nature of the regulatory authority essential for the most effective development of telecommunications in the public interest including an examination of the criteria that should be applied and the methods to be used in regulating the several factors set out in paragraphs 2 and 3 above. (i.e., of the Terms of Reference)."

The Trans-Canada Telephone System

The Trans-Canada Telephone System is composed of eight major Canadian telephone organizations, namely:

Newfoundland Telephone Company Limited
Maritime Telegraph and Telephone Company, Limited
The New Brunswick Telephone Company Limited
Bell Canada

Manitoba Telephone System
Saskatchewan Telecommunications
Alberta Government Telephones
British Columbia Telephone Company

In addition, Canadian Overseas Telecommunication Corporation is an associate member of TCTS.

Of the nine organizations mentioned, three are owned by provincial governments and one is owned by the Federal Government. The others are investor owned corporations. Only two of the eight full members fall within the federal regulatory jurisdiction as exercised by the Canadian Transport Commission. The remainder fall under provincial jurisdiction and the C.O.T.C. reports to Parliament through the Minister of Communications.

The organization of the Trans-Canada Telephone System is uniquely Canadian. It is a cooperative organization in which each member company has responsibility for planning and providing the telecommunications services in its territory. Each arranges for the connection of its network with that of other members of TCTS or with that of other telephone companies operating in adjacent territory. Beacuse each member has equal voice in the determination of TCTS policy and action, regional needs are fully represented.

Present Approaches to Regulation

As is shown in the TCTS submission to Telecommission Study 1(b), entitled "History of Regulation and Current Regulatory Setting", regulation of telecommunications has been

handled in various ways in different parts of Canada. Although the essential purpose of the industry and its regulators appears to be similar across Canada, regional differences in economic environment, political philosophy and service needs have resulted in a variety of approaches to the regulation of telecommunications.

In some provinces, for example, telephone service is supplied by private enterprise, subject to rate and other regulation under the jurisdiction of either the provincial or federal regulatory boards. In others, provincial Crown corporations supply the service. All provinces, except Saskatchewan, have appointed independent public utility boards with objectives, jurisdiction and procedures similar to that of the Canadian Transport Commission with respect to the regulation of telephone systems. Saskatchewan Telecommunications is a Crown corporation whose policies and rates are reviewed directly by the Saskatchewan Cabinet.

Important Aspects of the Existing Situation

The Canadian Transport Commission, in its memorandum entitled "Regulatory Bodies - Structures and Roles" which was forwarded to the Department of Communications, on April 10, 1970, discussed the existing regulatory structure set up by the Federal Government to regulate telecommunications in the field to telegraph and telephones. Provincial regulation was discussed in the TCTS submission to Telecommission Study 1(b). It is not necessary for TCTS to review or summarize these memoranda. However, there are certain features of

the existing regulatory structures which should be noted and which apply to both the federal and provincial fields. Other aspects of the matter will be dealt with later.

First, the powers of the existing regulatory authorities are regulative and corrective; they are not managerial. The CTC, its predecessor boards, and the provincial boards have reiterated this distinction time and again and have always attempted to respect the prerogatives of the management of the companies subject to regulation.

Second, the regulatory authorities are not makers of government policy. They are creatures of statute. They exercise whatever regulatory authority is conferred on them by their respective legislatures.

Third, federal and provincial regulatory policies are established by legislation, which is administered by the regulatory authorities. These statutes set out policy in the form of principles and criteria, and confer wide discretion on regulatory authorities to develop methods of applying such principles and criteria in the light of changing circumstances.

In summary then, under the present-day regulatory structure.

- the role of government is to define policy by means of statutory enactment;
- the role of regulatory authority is to regulate in accordance with statutory enactments;
- the role of management is to manage the industry,

This division of power and responsibility is considered to be conducive to and has resulted in the proper functioning and development of the Canadian telecommunications industry.

3. THE MERITS OF THE EXISTING REGULATORY STRUCTURE, CRITERIA AND METHODS

The most important fact to be noted about the regulation of telecommunications in Canada today is that, to the extent that it is responsible for achieving high quality service, it has fulfilled its basic purpose. The Minister of Communications has said,..."...I agree with those spokesmen from the industry who say that telephone service in this country is unequalled anywhere in the world..."[1]

It is accordingly useful to single out the important factors in the existing structures which contribute to this satisfactory result.

Independence of the Regulatory Authorities

The Federal Government and the provinces, except Saskatchewan, have established independent boards or commissions to administer their respective statutes. These are intended to be free of policitical and governmental influence. On most of them, members have security of tenure as well as immunities and powers in matters over which they have jurisdiction similar to those of the jurdiciary.

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1 Before the Transport and Communications Standing Committee of Parliament, Nov. 18, 1969, page 26 of the Proceedings.

TCTS is firmly of the view that the independence of the boards and commissions is one of the merits of the existing structure and must be maintained. TCTS subscribes to the opinion expressed in 1957 in the United Kingdom by the Committee on Administrative Tribunals and Enquiries as follows:

> "Tribunals are not ordinary courts, but neither are they appendages of Government Departments. Much of the official evidence, including that of the Joint Permanent Secretary to the Treasury, appeared to reflect the view that tribunals should be properly regarded as part of the machinery of administration, for which the Government must retain a close and continuing responsibility. Thus for example, tribunals in the social service field would be regarded as adjuncts to the administration of the services themselves. We do not accept this view. We consider that tribunals should properly be regarded as machinery provided by Parliament for adjudication rather that as part of the machinery of administration. The essential point is that in all these cases, Parliament has deliberately provided for a decision outside and independent of the Department concerned, and the intention of Parliament to provide for the independence of tribunals is clear and unmistakable."[2]

It is the opinion of TCTS that any regulatory board or commission, in the exercise of its regulatory function, should be outside and independent of any government department.

Judicial, Quasi-Judicial and Investigative Authority

The Canadian Transport Commission exercises its regulatory powers under the terms of the Railway Act. As the CTC said on

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2 Report of the Committee on Administrative Tribunals and Equiries, H.M.S.O., para 40, p. 9.

page 2 of its above noted memorandum:

> "In general, it exercises its regulatory authority by means of regulations published in General orders and by means of judgments following public hearings, at which all parties may present evidence and arguments, all of which is taken into account in the light of its relevance and the circumstances then prevailing."

The combination of powers given to the CTC by the Railway Act enables it to administer the Act and decide applications without being limited in the same strict manner as are ordinary Courts. Most of the provincial statutes that establish the regulatory agencies have similar provisions.

TCTS considers the type and scope of powers given to the regulatory boards by the respective statutes to be one of the merits of the present system. These powers are set out in some detail in other Telecommission submissions.

Regulatory Management

In practice, regulatory boards avoid interference with the management of the companies subject to their regulation and this is another merit of the existing regulatory practices. The Board of Transport Commissioners succinctly stated this position as follows:

> "In this connection, it should be pointed out that regulation is and must be, to a large degree "ex post facto". The Board has consistently held that its powers are regulative and corrective, and that they are not managerial. Thus, it is necessary for the Board to review the Company's actions from time to time, as it is doing in the present proceedings, and to take whatever corrective action for the future may be necessary, but the Board's powers do not envisage a retro-active adjustment of the actions of management. Regulation

> which is inflexibly committed to a rigid mathematical formula, fixed at a point in time, would eventually so circumscribe the operations of a utility as to leave little or no room for the exercise of judgment, initiative or enterprise by management in the decisions it must make daily. This would constitute an unwarranted invasion of managerial discretion prejudicial to the efficient operation of the business and could soon rebound to the detriment of the utility's customers."[3]

Impartiality of Regulators

Regulatory boards in Canada have, by their actions over the years, established a tradition of fairness and impartiality insofar as the regulated telecommunication carriers are concerned.

Regulation Directed Mainly to Rates

Historically, both provincial and federal regulation have been directed primarily toward the approval of rates. This being so, the regulated telecommunications carriers have been left relatively free to plan, construct and operate their systems with a minimum of operating constraints. TCTS believes that this environment has enhanced the development of a strong, self-sufficient industry and a reliable telecommunications system.

Acceptance of the Utility Pricing Concept

The present regulatory authorities have accepted for some years the utility pricing concept for services which a telecommunications carrier is obliged to furnish in accordance with the

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3 In re: Review respecting the British Columbia Company, 56 BTC 369; and in re: Review respecting the Bell Telephone Company of Canada, 56 BTC 535.

provisions of its charter or other enabling legislation. This concept means; in essence, that the rate schedules applicable to such services provided within a territory must be considered in total in order to provide revenues to meet the overall needs of the company. It recognizes the high degree of interrelation between classes of service. The fundamental advantage of this concept, which is of particular importance in Canada, is that the flexibility it provides in the design of rate schedules results in more people having good services made available to them at reasonable prices because inordinate disparties due to type of terrain, location, population density, etc., are averaged out.

Present Statutes Reflect National And Regional Needs And Differences

Another merit of the present regulatory systems is that the existing federal and provincial statutes and the regulations thereunder, reflect provincial needs and differences. This is viewed as an important element in Canadian telecommunications regulation. The co-existence of federal and provincial regulatory responsibilities with regard to telecommunications can ensure a balanced national outlook.

Acceptance Of The "Service On Demand" Philosophy

All of the regulatory bodies in Canada have accepted the philosophy that those services which a telecommunications carrier is obliged to furnish should be provided on a demand basis. This has ensured that the quality and availability of telecommunications

services have kept pace with the changing needs of the public.

In many other countries the provision of funds for telecommunications facilities has been on a budgetary system in which customer demand has not been the major factor. This is, perhaps, the chief cause of the inadequate availability, low quality, or high cost, by Canadian standards, of telecommunications in most European countries.

No Dual Regulation

In today's regulatory environment in Canada each company is accountable to a single regulatory authority which thus has total responsibility both for regulating in the public interest and for the effect of regulation on the financial health of the company.

4. DEFECTS OF THE EXISTING REGULATORY STRUCTURE, CRITERIA AND METHODS

The regulatory environment which has evolved through the conscious acceptance of the foregoing principles has been an important force in the development of telecommunications services suited to the Canadian need.

There are, however, a number of areas where improvements are required in the public interest, and these vary in the different regions in which the telecommunications industry operates. The following remarks have general application.

Delay

The basic nature of the quasi-judicial regulatory process, particularly in matters such as rate hearings, leads to delay, despite the best efforts of all parties and of the regulatory authority itself to proceed with dispatch. This creates a particular problem for the carriers in an inflationary environment.

Unfortunately, recognizing this defect does not lead to a simple solution. As with procedure in the ordinary courts, it is necessary, if justice is to be done, to enable both the utility and other interested parties to be heard.

Further, the preparation and subsequent evaluation of the detailed financial reports necessary to allow the regulatory authority to fully understand the carrier's financial position contribute to the delay. Efforts should be made to find means

of speeding up the process. It may be that a continuing system of financial reporting and evaluation, supplemented by informal discussion, would result in the regulatory authority having a more complete understanding of the carrier's financial position at all times and expedite matters at a rate hearing.

Appeals

Provincial - Generally speaking, an appeal lies to the Appellate Division of the Supreme Court of each province, on a question of law or jurisdiction, with a further appeal from that Court to the Supreme Court of Canada.

Federal - An appeal with leave lies to the Supreme Court of Canada on questions of law or jurisdiction, and an application may also be made to the Governor-in-Council, who may alter or rescind any decision, order, rule or regulation of the CTC.

It is the opinion of TCTS that there should be a system which permits appeals from the decisions of regulatory tribunals only to the courts. There should be no appeal from the decisions of regulatory tribunals to any other body.

The question of appeals to the courts is now before Parliament[4] but the implications of the proposed legislation are not yet clear.

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4 Bill C-192, second session, 18-19 Eliz. II, 1969-70.

Failure of Present Law to Permit Rate Testing

All Statutes with regard to the regulation of utilities appear to prevent testing new rate concepts or structures in selected portions of operating territories or with selected customers. As a result, any new rate structure must be introduced on an "across the board" basis. TCTS firmly believes that rate testing would yield useful information enabling the rearrangement of some rates to the mutual satisfaction and benefit of utilities and their customers.

Failure of Railway Act to Require Consideration of Fair Return

One of the most important aspects of rate making is the balancing of consumer and investor interest.[5] It must be kept in mind that most telecommunications carriers in Canada are investor-owned corporations and all are capital intensive.

In order to attract capital a carrier must be able to show profits and provide the holders of its securities with a competitively attractive return on their investment.

Most provincial legislation relating to public utilities makes it a legal duty of the regulatory board to allow the

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5 Federal Power Commission et Al v. Hope Natural Gas 51 P.U.R. L.S. 193, 320 U.S. 591.

utility a fair or resonable return.[6] The Railway Act makes no such provision.

Jurisdiction

The lack of a formal channel to dispose of customer complaints in interprovincial service may indicate, to some, that because no total interprovincial regulatory structure exists, there is a degree of deficiency in the methods by which these problems are treated.

Over the years interprovincial traffic has been subject to some of the same types of problems that are encountered in the internal operations of individual companies, and these have been solved by the co-operative efforts of the carriers and the existing regulatory bodies.

This co-operation has been effective in providing equitable solutions in the past, and further study would be required to determine whether the lack of a complete structure for this purpose is likely to become a defect in the future.

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6 Statutes of Newfoundland 1964, No 39; Revised Statutes of Nova Scotia 1967, C258; Revised Statutes of Prince Edward Island 1951, c. 133; Statutes of Alberta 1960, c.85; Revised Statutes of British Columbia 1969, c.323; Revised Statutes of New Brunswick 1952, c.186.

5. EXTENT AND NATURE OF REGULATORY AUTHORITY

Terms of Reference (Telecommission Study 7 (ab) - Section 6)

"The extent and nature of the regulatory authority essential for the most effective development of Telecommunications in the public interest including an examination of the criteria that should be applied and the methods to be used in regulating the several factors set out in paragraphs 2 and 3 above." These factors are:

- the right to establish and operate facilities for telecommunication by any means;
- the technical characteristics of telecommunications facilities;
- the nature and quality of services offered;
- tariffs, rates of return, and financial settlements for services;
- the corporate and financial structure and ownership of the persons regulated;
- facilities, services and aspects of their establishment and operation that are not now subject to regulation.

General Considerations

The preceding portions of this memorandum have dealt with the existing regulatory structure in the field of telecommunications in Canada. The regulatory powers and authority essential to effective regulation and the philosophy of their application will now be reviewed.

The objectives of Canadian regulators should be to ensure that rates charged by the carriers are neither excessive nor unjustly discriminatory and that the quality and types of service offered are consistent with the reasonable demands of

the public.

It is the responsibility of the regulators to maintain a regulatory atmosphere within which carriers may operate efficiently.

TCTS subscribes to the principle that competition is the most effective form of regulation although it is in the public interest for certain services to be provided on a monopoly basis. Therefore, in the opinion of TCTS, rate regulation of monopoly services should serve primarily as a substitute for competition.

Regulation should not concentrate on perpetuating standards of the past nor should it concern itself with the mechanics by which objectives are pursued; it should be forward looking, and concentrate on creating a regulatory environment which will make possible the attainment of objectives.

Regulation and management should complement and not duplicate each other. Regulation should be directed at those factors required to ensure that the public receives the benefit of just and reasonable prices and is not subjected to unjust discrimination, while at the same time preserving the financial integrity of the utility. Responsibility for modernization, innovation, cost reduction, improved efficiency, and methods of financing should remain with management. A profusion of controls would not encourage management to become efficient, to innovate, or to modernize.

Regulation must serve to implement enacted legislation. Such legislation is a reflection of the policy of Parliament or of a provincial legislature. Policy goals can only be met if they are known; thus the need for clear and acknowledged policy objectives is obvious. Increased dialogue between government and the telecommunications carriers will result in a common understanding of the major issues affecting national telecommunications policies.

Of primary importance in reviewing the extent and nature of regulatory authority is an examination of such major elements as rates, fair return and right of entry into the telecommunications carrier field.

Rates:

Regulators and industry require maximum latitude, within defined limits, to accomplish their respective objectives. Legislation respecting rate regulation should be broad enough to permit flexibility in meeting changing conditions and should stipulate only:

- that rates and charges will be just and reasonable.
- that rates and charges will not be unjustly discriminatory.
- that rate testing will be permissible.

Legislation should define, as precisely as possible, the regulated monopoly business. The company-wide or provincial-wide pricing principle applies to this monopoly business only and depends for its proper application on the absence of competition.

Revenues from high-volume low-cost areas are vulnerable to competition. If they are eroded, distribution of service to the low-volume high-cost areas will become more costly to the customers.

While a high degree of uniformity has been achieved in rates for services that cross jurisdictional boundaries, complete rate uniformity is neither possible nor desirable due to different geographic, social, political and economic conditions in the various regions of Canada. Meaningful comparisons of rate schedules require an understanding of these basic differences.

Existing legislation does not clearly permit market testing of new rates or new service offerings. TCTS believes such testing would be beneficial. For example, it would be in the consumers' interest if the testing of further reductions in long-distance rates during off-peak times were to be permitted. If the experiment should be successful both the consumer and the carrier would benefit. Customer acceptance of service offerings. could also be tested under controlled conditions if temporary offerings were permitted at different rates in selected test areas.

Fair Return

The jurisdiction of the federal regulatory authority in Canada is a jurisdiction in respect of just and reasonable rates. Power to determine a rate of return or a permissive level of earnings of a company flows from the CTC's power to

approve and enforce just and reasonable rates. Rates are not just and reasonable if they do not provide the company with a fair return.

A definition of fair return which is generally accepted in Canada, and which was approved as recently as 1960 by the Supreme Court of Canada in the case of B.C. Electric Railway Co. Ltd. v. Public Utilities Commission of B.C. et al 1960 SCR 837, was handled down by Lamont J. of the Supreme Court of Canada in the case of Northwestern Utilities Limited vs. City of Edmonton 1929 SCR 186 at p. 193:-

> "By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company's enterprise."

The definition is valid today.

In summary, the criteria by which a fair return and a just and reasonable level of earnings can be tested include:

(a) The utility's ability over the long term to provide earnings comparable to those available to investors in other companies, risks and uncertainties being taken into consideration;

(b) The maintenance of the financial integrity and credit of the utility;

(c) The present and future ability to attract, at

reasonable cost, the capital necessary to provide the services required by the public.

These are some of the criteria by which regulation of rates should be guided. TCTS favours retention of regulation of telecommunications rates by reference to the standard of "just and reasonable rates".

Right of Entry into the Telecommunications Carrier Field

This section is directed to determining where and when the public interest requires that a person should be allowed to provide a telecommunications carrier service. This is best done by examining the various types of services now available.

For purposes of this memorandum TCTS considers that there are two major categories of telecommunications services, those that are considered to be properly monopolistic and those that should be provided competitively.

As stated, carrier legislation should define, as precisely as possible, the regulated monopoly business. This definition should recognize the existence of alternative methods of providing a regulated service so that regulator and company can operate properly individually and together. It is essential that government, in the public interest, consider very carefully any action which would tend to jeopardize the

ability of a carrier to furnish general public telecommunications service at uniform rates.

In particular, careful consideration should be given to the overall advantages and disadvantages of allowing entrepreneurs to set up alternative services directed solely and exclusively at the most attractive portions of the monopoly service market. For example, an entrepreneur might choose to set up a telephone service designed to serve only long-distance calls of business establishments between major centres. If such a service were able to make successful inroads into the long-distance business of a telecommunications carrier, whose duty it is to supply service throughout its territory, the result would be that the carrier would be obliged to continue to supply service in the less attractive areas, while it would lose a portion of the revenue from the more attractive areas. Such a result, in a regulated industry, would lead inevitably to payment of higher rates by the general public in order to enable the carrier to cope with the resultant loss of revenue.

In summary, where monopoly is necessary in the public interest, the service must be clearly defined and the position of the telecommunications carrier must be protected.

6. RECOMMENDATIONS

Canada is a nation organized on federal principles, and it is universally accepted that each of the two major levels of government, federal and provincial, is supreme in the field of jurisdiction allotted to it. The following recommendations recognize the importance of this fact and suggest a means of effectively bridging the jurisdictional gap.

A Canadian Telecommunications Policy

TCTS deems it important to develop and declare a Canadian telecommunications policy.

Such a policy should be a prerequisite to any changes in the telecommunications regulatory system. An effective policy can only be developed by co-operation between federal and provincial governments, after extensive consultation with the telecommunications carriers and the users of telecommunications.

A National Association of Regulatory Authorities

Despite the existence of both federal and provincial regulatory authorities, it is a fact that national, regional, and local telecommunications services to a large extent share equipment and markets and jointly contribute to the financial position of the carriers. Thus there are many areas of mutual interest among the various levels of government.

It is the opinion of TCTS that the federal-provincial division of powers which exists in Canada requires consultation

between various governmental authorities on matters of mutual interest.

TCTS suggests that steps should be taken to form a National Association of Regulatory Authorities on matters of regulation of telecommunications, which would consist of delegates from federal and provincial regulatory bodies. Such an association would consult on matters of rates and service, and national and provincial objectives, and would be informed as to regional differences and requirements. The advantage of such an association would be that each regulatory authority (provincial and federal) in the country, when exercising its own powers within its own jurisdiction, would have a wider knowledge of the problems of telecommunications throughout the country.

In the submission of Telecommission Study 7 (c), entitled "Relationship between the Department of Communications and the Telecommunications Carriers", TCTS suggested that a National Telecommunications Advisory Council be formed, to serve as a consultative body in connection with development of policy. This National Telecommunications Advisory Council would be composed of representatives from Government and the industry. However, it would fill an advisory, and not a regulatory function. The National Telecommunications Advisory Council and the National Association of Regulatory Authorities should work closely together.

Joint Sessions of Federal and Provincial Regulatory Authorities

In its submission on Telecommission Study 1 (a), entitled "Analysis of the Constitutional and Legal Basis of the Regulation of Telecommunications", TCTS analyzed the constitutional basis for regulatory jurisdiction over telecommunications. Having reviewed the law as stated in leading decisions of the Judicial Committee of the Privy Council and of the Supreme Court of Canada, the TCTS study group summarized the principles extracted from these cases as follows:

A. A Provincial legislature has sole jurisdiction to regulate a Provincially incorporated telephone company which operates within the Province.

B. Provincial legislatures have sole jurisdiction to regulate companies of the type mentioned in situation A, notwithstanding the fact that their systems of lines connect at the borders of their respective provinces.

C. The Federal Parliament, acting alone, has no jurisdiction to regulate "Joint Through Rates" between companies of the type mentioned in situation A and companies subject to the Federal jurisdiction.

D. The Federal Parliament has jurisdiction to regulate a telephone company which operates in more than one Province or which has been declared to be for the general advantage of Canada.

E. The Federal Parliament has jurisdiction over the "Joint Through Rates" negotiated solely between telephone companies of either type mentioned in situation D.

Thus, interprovincial rates have not generally required approval of regulatory bodies.

While TCTS is strongly of the view that additional regulatory bodies might unnecessarily complicate the regulatory

situation, its members believe that a regulatory system could be designed to have jurisdiction over interprovincial rates.

There are three very important factors that TCTS believes must be considered in developing such a regulatory system.

- regional interests, (social, economic, and political) must be recognized.
- any such system must be consistent with the constitutional principles outlined in A, B, C, D, and E as set out above.
- no single service should be considered in isolation because many of the telecommunications services provided by a carrier use common equipment, are offered to the same markets, and mutually contribute to the overall financial position of the carrier.

Having these factors in mind, TCTS believes that boards appointed by provincial governments, in joint sessions with each other, and in joint sessions with a federal board, could approve interprovincial rates.

By action in joint session in this way, the many merits of the existing regulatory structure, as outlined earlier, would be retained. This would also tend to ensure that regulatory action by the various authorities would be consistent.

7. CONCLUSIONS

The Trans-Canada Telephone System, in making the recommendations contained herein and in bringing various points forward for consideration, has drawn heavily upon its experience, and that of its members as regional operators of the major portion of the Canadian telecommunications system, gained over several decades.

TCTS operates in the total Canadian environment and its structure, like the political structure of Canada itself, has developed as a functional federation. In its day to day operations TCTS faces the problem of providing telecommunications services on a nation-wide basis while at the same time meeting essential regional needs. Its effectiveness to a large degree depends upon considering all interests and co-operation. This, in the opinion of TCTS, is exactly the situation faced by the telecommunications regulators in Canada in co-ordinating their efforts.

There is ample evidence that TCTS has been successful. In comparison with telephone service in practically every other country of the world, Canadians enjoy a system providing higher quality, more ready availability and lower relative cost. In short, TCTS and the regulatory environment in which they operate easily pass the most critical test of overall effectiveness: the system works and works well.

TCTS is of the opinion that a somewhat similar organization

would be effective for the co-ordination of regulatory authority and its recommendation for a National Association of Regulatory Authorities reflects this.

TCTS is aware that conditions in the field of telecommunications are continuing to change more rapidly than ever before and assuming an ever more vital role in our society. Telecommunications policies, both provincial and national, are increasingly significant to Canadians. TCTS is prepared to participate to the fullest extent in the development of a national telecommunications policy. It strongly recommends the formation of a National Telecommunications Advisory Council, as stated in Telecommission Study 7 (c), to assist the policy makers.

Finally, TCTS recommends that a regulatory environment be developed in which the accent is placed on setting broad, forward looking objectives rather than on the detailed methods of achieving them.

Trans-Canada Telephone System

Ottawa

September 1970

REGULATORY BODIES
STRUCTURES AND ROLES

TELECOMMISSION STUDY 7 (A) (B)

SUBMITTED BY:

CANADIAN NATIONAL - CANADIAN PACIFIC TELECOMMUNICATIONS

SEPTEMBER 1970.

REGULATORY BODIES

STRUCTURES AND ROLES

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1. TERMS OF REFERENCE

Regulatory Bodies - Structures and Roles

To examine and report on:

1. The existing federal and provincial regulatory structure in Canada, and the inter-relationships of its components.

2. The extent and nature of existing federal and provincial regulatory authority as regards:

   a. the right to establish and operate facilities for telecommunication by any means;
   b. the technical characteristics of telecommunications facilities;
   c. the nature and quality of the services offered;
   d. tariffs, rates of return, and financial settlements for services;
   e. the corporate and financial structure and ownership of the persons regulated;

3. Facilities, services, and aspects of their establishment and operation that are not now subject to regulation.

4. The criteria applied and the methods used in exercising regulatory authority.

5. The merits and defects, in terms of effectiveness, of the existing regulatory structure, criteria and methods in relation to:

   a. services now available;
   b. the effects of anticipated technological and economic developments during the next ten years.

6. The extent and nature of the regulatory authority essential for the most effective development of telecommunications in the public interest, including an examination of the criteria that should be applied and the methods to be used in regulating the several factors set out in paragraphs 2 and 3 above.

7. The options open to the federal Government in devising a new regulatory structure.

The CTC, CRTC and DOC are to prepare that part of the report dealing with items 1 to 4 inclusive. Items 5 and 6 are also to be considered and reported on individually by the industry participants. The DOC will analyze all submissions and formulate a draft of the options required in response to item 7. These

will be the subject of review and comment by all participants prior to final submission to the Telecommission.

This paper is CN-CP's submission in response to items 5 and 6. It is important, however, for an appreciation of these recommendations to recognize the present and future structure of the Telecommunications Industry. A summary of CN-CP Telecommunications recommendations in this respect as made in other papers is therefore included.

2. STRUCTURE OF THE TELECOMMUNICATIONS INDUSTRY

(a) Telecommunications Services Available

Preliminary to a consideration of the role of regulation in the Telecommunications Industry, it is important to define Telecommunications Services and differentiate between services provided by a Telecommunications Carrier and by a person for private use, as both segments of the industry provide services today.

The derivation of definitions for Telecommunications, Telecommunications Service and a Telecommunications Carrier were part of the Study Group tasks in response to Telecommission Study 1(c) entitled "Concept of a Telecommunications Carrier". TCTS and CN-CP both agreed on the following:-

Telecommunications

- is the emission, conveyance, or reception of information by, in whole or in part, electromagnetic waves.

Telecommunications Service

- is a service whose predominant purpose is the emission, conveyance, or reception of information by, in whole or in part, electromagnetic waves.

Telecommunications Carrier

- is a person authorized to provide, for compensation, Telecommunications Service to others, including any function incidental thereto, by means of any appropriate facility, apparatus or instrumentality.

Under special circumstances, CN-CP acknowledge the need for persons to provide Telecommunications Services for their own use. Where the demand for service is minimal or where operating requirements exist, peculiar to a particular user, it may be in the public interest that service be provided by other than an authorized Telecommunications Carrier. Each case, however, should be examined carefully for, in general, service provided by a Telecommunications Carrier should be more economical of material, financial and public resources. Services provided by Telecommunications Carriers are designed to cater to private as well as public requirements.

It is not pertinent to this study to examine in detail the full range of Telecommunications Services available in Canada today. It is important, however, to differentiate between public and private service offerings as there are basic differences in the regulatory requirements for these two fundamental sectors of service, given an industry structure recommended herein.

CN-CP define:-

Public (Telecommunications) Service
- as a service which provides for the exchange

of traffic between <u>any</u> subscriber to the service.

<u>Private (Telecommunications) Service</u>
- as a service which provides for the exchange of traffic between <u>specified</u> subscribers to the service.

In accordance with these definitions, CN-CP contend that Public Services should be provided as monopolies to maintain, in the public interest, the integrity, reliability and viability of systems dedicated to public use. Private Services need not be monopolistic and in fact the telecommunications (private service) market in Canada is sufficient to support competition.

There are in Canada today two public services, telephone and telegram services, which traditionally have been viewed as monopolies and have been subject to regulation. CN-CP foresee the need for an extension of the telegram monopoly to include Public Record Service in order to satisfy the growing requirements of the Canadian public for record transmission services.

Within the private service sector many telecommunications services are available which may be broadly classified as:-

<u>Dedicated Private Line Services</u> - voice, digital record, facsimile, broadcast (audio, video)

Line Switched Services - for example CN-CP's Data Telex, Broadband Exchange Service and Hot Line Telephone Service.

Message Switched Services - which provide switching record transmissions by means of computer oriented (store and forward) switches.

It is important to reiterate that these are broad classifications within which other discrete classes of service can be identified if required.

In fact, with the addition of telegram services, these broad classifications embrace all services (public and private) supplied by Canadian Telecommunications Carriers today. It is perhaps useful to describe each briefly and differentiate under each heading between public and private services.

Dedicated Private Line Services

As the title implies these are Private Services which evolved to satisfy the need to transfer large volumes of traffic between limited numbers of fixed correspondents; a need that was not economically or practically feasible through the use of public telephone or telegram services. At this time the majority of such services are intra-company voice services and record services operating at low speeds

(Teleprinter) although services are available for a full range of transmission capabilities. They use terminal equipment and interconnecting facilities on an exclusive use basis. Charges consist of monthly rentals for terminal equipment and rentals for circuits connecting such terminal equipment at rates related to distance for specific periods of time and to type of service necessary to meet customer requirements, in accordance with published tariffs.

Line Switched Services

These are switched services, public or private, which provide for direct connections between equipment situated in subscriber's premises. Service is provided by means of exchanges centrally located to serve specific communities and linked together by common trunk groups which enable a subscriber to share trunk circuits with other subscribers although, while connected, he has the exclusive use of the circuit allocated to him in the selection process. The service is designed to meet the needs of users with a requirement to communicate with a large number of correspondents or a limited number of specific correspondents at a volume level which makes dedicated Private Line Service

uneconomical. Subscribers to these services pay a fixed monthly fee for the exchange connection and the terminal equipment, plus a toll for each call made, based on the circuit holding time and the distance between the points of origination and destination. Public telephone service is a line switched service and CN-CP classify Telex and TWX, which are line switched services, as Public Services. In addition there are a variety of private (line switched) services such as CN-CP's Data Telex, Broadband Exchange Service and Hot Line Telephone Service which provide only limited connectability.

Message Switched Services

These are services provided for record transmission using store and forward switching (computer oriented switches) as opposed to line switching techniques. Incoming lines are connected to computers which store complete messages or parts of messages and forward them in accordance with prescribed routing information to the point of destination or to an adjacent switch as outgoing lines are available. A variety of service options are available such as code and speed translation,

multi-addressing, message retrieval and accounting. At this time services are oriented to private use and have been provided on a contractual basis. In view of the variety of special requirements this practice will be continued. CN-CP intend in the future to offer a public Message Switched service. At that time tariffs will be published to cover public offerings.

(b) Effects of Anticipated Technological and Economic Developments

In order to meet the increasing demand for new and improved services, every Telecommunications Carrier must be continually aware of both short and long term user requirements and the state of the telecommunications art. Plans for modernization and expansion are completely dependent on the availability and accuracy of this information which must be under constant review. The fact that Canadian Telecommunications Carriers have been responsive to public demands attests to their acceptance of this responsibility.

One notable trend of significant importance for this decade, particularly for the data processing community is the rapid acceptance of new record/data networks. Digital network design is presently evolving in such a way that digital technology (transmission and switching) is being gradually phased into record oriented carrier networks. It is realistic to predict that much more cost-effective digital technology will become a general offering of such carriers during the 1970's. This change will bring out quality improvements and price

advantages.

In contrast, telephone oriented networks will continue to employ, up to the last decade of this century, analogue transmission techniques. This is quite proper for voice services, taking into account the large frequency spectrum requirement for digitized voice transmission and the fact that development of advanced redundancy reduction technology cannot be anticipated in the near future.

Since there is no feasible alternative in sight to line switched networks for voice communications, it can be anticipated that the pricing of telephone calls, or digital transmissions using the voice network will remain on a holding time basis. In this respect there is justification for retaining the minimum charge (presently 2-3 minutes) to cover the cost of estatlishing connections. This approach is not objectionable since a dedicated circuit is required for the duration of the telephone call to permit two-way conversation.

The relevance of the foregoing to the setting of

regulation criteria lies in the possibility of changing the pricing philosophy for record services. A "quantity - of - information" pricing scheme (as opposed to holding time) appears inevitable but in fairness to the carriers it will have to be introduced gradually. In addition, digital network structures could be such that distance as a factor in pricing will be reduced or even ignored for simplicity. The importance of these benefits is a major public interest consideration.

Of equal importance is the financial health of the carriers who will be introducing these changes. Specifically, since increments in demand will lag behind reductions in prices, although demand will be very price elastic, carriers will need to work closely with the regulatory authority to introduce price changes in phases to avoid heavy financial setbacks.

Other areas wherein the regulatory authority and the regulated carrier will have to work in close cooperation involve tariff modifications to

accommodate evolving economic requirements such as those for line sharing, bulk pricing, channelizing, inter-connection of private services or equipments, and market testing.

(c) Recommended Structure for the Telecommunications Industry

In considering an optimum structure for the Telecommunications Industry, best suited to meet Canadian needs for Telecommunications Services in the future, one must be guided by the basic premise underlying policies and laws governing Canadian industry and commerce; namely, unless inconsistent with public interest, competition is to be encouraged and relied upon to regulate the economy. Competition affords the most reliable incentives for innovation, cost reduction, efficient resource allocation and consumer protection against high prices and inferior products and services. Most of the Canadian economy fits the competitive pattern.

Where telecommunications needs require access to any subscriber to a service, that is a public service, special considerations relating to system optimization, integrity and reliability apply that make a case for monopoly. In all other circumstances, services can be more responsively and efficiently handled by competing suppliers.

Because the Telecommunications Industry is capital

intensive and becoming increasingly so as a result of the high rate of technological development and obsolescence, and because of the inherent economies of scale, the organizational choice for the industry must be a mix of monopolies and limited competition. CN-CP believe that the course of limited competition is desirable in the public interest and compatible with the historical pattern Canada has followed in the public utility and transportation fields. The airlines and railroads serve as prime examples.

The present structure of the Telecommunications industry which consists essentially of two competing groups reflects the choice CN-CP advocates. The two groups are: CN-CP as one group and the telephone system which includes Bell Canada and provincial and regional telephone companies as the other. Ownership in the industry is predominantly private with one Federal and three Provincial Government owned carriers. Public telephone and public telegram services are operated as monopolies by the telephone system and CN-CP, respectively, with competition

between these two carriers in other service areas.

This carrier configuration has performed well and has met Canadian needs with wide availability of essential services at prices that have, in general, received public acceptance. Both carrier groups have been responsive to their public duty in their rate making policies. They have been able in the past to raise the necessary capital to provide the services needed and the performance of the present systems attests to the quality of their services. There is no evidence to suggest that the present two-competitive-group system will not be able to adequately meet anticipated telecommunication needs in the future, given the recommendations proposed herein.

Except in certain areas of Newfoundland and the Yukon and the North West Territories which are served by Canadian National Telecommunications, public telephone service in Canada is provided by the member companies of Trans Canada Telephone System and other independent telephone companies.

These telephone companies and Canadian National Telecommunications provide service in contiguous territories, consistent with their charters or enabling legislation, and interconnect with one another to provide long distance telephone service. Such an integrated system, operated as a monopoly, is in the public interest and should be retained. Competitive offerings would involve an uneconomic duplication of facilities.

CN-CP contend that under present conditions, public telegram service is best provided by a single carrier group. Because of the rapid decline in usage, currently averaging approximately 6% per annum (in part due to the increased use of TWX and Telex services), business has reached a level that can hardly support one carrier. It was this situation that caused Canadian National and Canadian Pacific to abandon competition and pool their telecommunications resources to achieve all possible economies.

CN-CP also contend, that there is a need in Canada for public record services, that is (record) services to which any member of the public can subscribe

and by means of which any subscriber can transmit or receive record traffic to or from any other subscriber. As public services, the provision of these (record) services should be a monopoly and it is recommended that CN-CP Telecommunications assume this responsibility as an extension to the provision of public telegram services.

Specifically this monopoly (in public record services) should include provision of:

(a) Public Telegram Services

(b) Public Line Switched services (including quasi real-time systems): record services at terminal transmission speeds up to 600 bauds (speeds which can be accommodated economically by telegraph circuits without resorting to a full voice bandwidth)

Note: This would require that the existing TWX, Telex, Data Telex and Telegram services be integrated into a single network.

(c) Public message switched record services involving store and forward techniques operating at any speed dictated by the current practice and the state of the art.

Similar to public telephone service, competitive offerings of public record service would involve an uneconomic duplication of facilities which is not in the public interest.

CN-CP have consistently demonstrated initiative and leadership in the development of record services. They first recognized the public need for a switched record service by introducing Telex in 1956, six years ahead of TWX, and for many years previously had been designing and installing systems for telegram traffic and private use. Computer based store and forward services were first offered by the CN-CP in 1964. They are now operating four independent systems serving nearly 1000 lines and 3000 outstations operating at speeds ranging from 75 to 2400 bauds. These systems include over 500 million characters of mass storage. Two additional store and forward systems will be placed in service before the end of 1970 and plans are already being made for new Telex offerings and the integration of Telex, Data Telex and other digital services using computer oriented switches.

A monopoly in public record services, owned and

operated by CN-CP, will promote healthy intermodal competition with the monopoly in public telephone service. This is consistent with the position of favouring competition in the Telecommunication Industry. The monopoly will stabilize and strengthen CN-CP's financial base and allow plant development to lessen, in part, the advantage held by the telephone system in their ability to realize economies of scale. In addition the exclusive responsibility to supply public service involving the use of store and forward switching techniques provides for interconnection with a similar system being developed by Western Union in the United States.

Thus the structure recommended for the Telecommunications (Service) Industry is a competitive one but limited, at this time, to two competing carrier groups, the telephone system and CN-CP Telecommunications, the former having a monopoly for public telephone service, the latter a monopoly in public record service, with both groups competing for the provision of private services.

3. REQUIREMENTS OF REGULATION

To place in perspective the development of our position on a scheme of effective regulation, it is essential to define the purpose and goals of regulation. It is also important to note the pitfalls of these definitions and related principles. Within the Canadian economic environment, competition and regulation have the same fundamental objectives: the efficient allocation of resources and the protection of consumers against exploitation. It is the means of obtaining these ends that are quite different. Competition operates through profit incentives and penalties determined by prices set in the market place. Regulation, however, must influence rates itself, thereby determining both the profit incentives and the penalties. Experience clearly indicates that regulation like competition, falls short of perfection.

It has long been accepted that public utilities, such as telecommunications carriers, in which competition is virtually non-existent or effective only within a segment of their activity, must be regulated by government to protect the public interest. This implies that regulation is merely a substitute for competition to promote the public welfare. However, in the case of telecommunications carriers, regulation should be designed having in mind that in the Canadian context these enterprises are engaged in competitive

as well as non-competitive activities. Even within the non-competitive field intermodal competition is present: a telephone call may be a satisfactory substitute for a telegram.

The objectives of regulation are essentially to protect the consumer against inadequate service, unreasonable prices, unjust discrimination and undue preference.

However, there are other important objectives. Regulation should insure that new services will keep pace with technological advances when a satisfactory level of demand develops, and that new areas will be served when there is sufficient demand. Regulation must promote effective competition.

An important factor must be kept in mind: viz. regulated carriers have to operate within the framework of a competitive economy. They must obtain capital, labour, and materials in competition with non-regulated industries. Adequate gross revenues are not guaranteed to regulated carriers. Regulation must provide incentives to adopt new methods, improve quality, increase efficiency, cut costs, develop new markets and expand in accordance with consumer demand. In short, regulation being a substitute

for competition, it should strive to place the regulated carriers on the same footing as competition places non-regulated industries.

Given a monopoly in public telephone and in public record services possessed by two competing carrier groups, Parliament has the duty to simulate in the best way possible, through its laws and regulations, an environment of effective competition.

In 1968 all Canadian Telecommunications carriers grossed 1.385 billion dollars in revenue of which 90% accrued to the Telephone Companies, primarily from monopolistic telephone services. In the order of 150 to 200 million dollars was derived from other services, competitive services and public telegram and cable services. Of this amount approximately 83 million dollars, or less than 7%, accrued to CN-CP Telecommunications. Capital investment was in approximately the same proportion, in excess of 5 billion dollars for the telephone system as compared to 400 million for CN-CP.(1)

Although both groups provide monopoly and competitive services, the above figures demonstrate that only the telephone industry possesses real monopoly power, and that the opportunities to

(1) 1968 Dominion Bureau of Statistics Report.

achieve economies of scale favour the telephone system. The recommended extension of CN-CP's monopoly in public telegram service to include public record services would strengthen CN-CP's position and provide for healthy inter-modal (public telephone - public record) competition. Establishment of a monopoly in public record service requires legislative action. Despite denial by Parliament of a CN-CP monopoly in the public record services, there are certain public policy goals which regulation cannot ignore.

Regulation must prevent practices harmful to competition. In this respect it is important that carriers be precluded from taking advantage of available returns from monopoly service areas to subsidize marginal or loss situations in competitive markets. It is important also that no undue advantage be taken of monopoly situations to create unequal opportunities in the field of competitive services.

There are today strong evidences of cross subsidization. For example at present rates, telegram services do not produce for CN-CP a level of earnings equal to its overall rate of return. TWX service, as presently provided, does not have its own long distance plant. It uses the same facilities as the long distance telephone service. Even

so, the charges for TWX service are lower than long distance telephone charges and are not subject to a two/three minute minimum charge. The foregoing clearly suggest cross subsidization and there are many similar situations in other service areas.

There is a barrier to effective competition in situations where an advantage is held by one carrier in the provision of competitive services by reason of its exclusive position in supplying of public services. For example CN-CP are precluded from competing effectively for private line voice services because of its inability to interconnect these services with the public telephone system for local distribution, as the telephone system does for their similar services. This is of particular significance today as many users of telecommunications service contract for services of various types, in large quantities as a total package.

Detailed recommendations to achieve a satisfactory level of control are presented in a later section of this paper. However, to give this aspect of regulation all the emphasis that it requires, it is treated here under a separate heading. Essentially, and irrespective of whether or not the industry is restructured by Parliament or

maintains the status quo, it is recommended that all tariffs must be compensatory for each class of service offered. This implies accurate cost separation between the various classes of service offered by a carrier.

Most emphatically accurate cost separation between monopolistic operations and competitive operations is mandatory. A slight shift in cost allocation between these two sectors would allow the overwhelming monopoly power of the telephone industry to destroy all effective competition. Minor exceptions should be allowed for services to remote areas under development where the total demand for services is small (e.g. Yukon and NWT). In such areas all resources must be pooled to provide viable public services at reasonable prices.

In summary, therefore, regulation of the Telecommunication Industry must protect and promote the availability of Telecommunications Service to meet user requirements and the ability of Carriers to meet these requirements, all consistent with the public good as follows:

National Requirements

Regulation of the Telecommunications Industry must be such that it will promote the provision of services which;

(1) Are responsive to public demands.

(2) Strengthen the national economy and social structure.

(3) Are efficient in the use of radio frequency spectrum.

(4) Do not concentrate economic control.

(5) Provide for national security.

(6) Are responsive to change and devlopments in national policy.

User Requirements

The user is primarily concerned with the availability, cost and performance of services. Specifically the user needs assurance that:

1. Services will be available where and when needed, consistent with his particular requirements, which are designed to minimize (capital and maintenance) costs. This requires that the Carriers take full advantage of technical developments to improve existing services and establish new services.

2. The quality and reliability of service is provided and maintained to the highest degree possible at reasonable cost.

3. Rates charged for service are not unduly preferential or unjustly discriminatory with rates charged elsewhere for services of the same description offered under substantially similar circumstances and conditions.

Rates should be related to the cost of providing service over a particular service offering.

4. Rates charged for services do not reflect costs of unreasonable capacity for maintenance, expansion and diversification.

5. An alternate supplier of Telecommunications Services will be available if the quality of service is less than expected.

6. A choice of suppliers will not be limited by artificial barriers between Carriers which preclude competition for Private Line Services. This requires that all Carriers have the right of access to local switching facilities, where supplied by a single Carrier, to extend their Private Line Services.

Carrier Requirements

The carrier is primarily concerned with its ability to provide marketable services at prices which will earn a fair and reasonable return and attract new capital. It must be assured that:

1. Regulation will avoid a competitive advantage being held by one Carrier in the provision of

competitive services by reason of an exclusive position in the supply of public services which would prevent other Carriers from sharing in the full market potential.

2. Regulation will prohibit cross subsidization between classes of services and in particular between monopoly and competitive services.

3. Regulation will be sufficiently flexible to permit special rates under certain circumstances. For example, special rates should be recognized for -

   (a) Inter-carrier rentals

   (b) Large single user networks where the user may make a capital contribution towards the provision of service or is prepared to enter into a long term contract.

   (c) Market testing, e.g. provisional rates for new developments.

4. Regulation will not limit earnings to the extent that will affect its ability to -

   (a) Attract new capital.

   (b) Maintain adequate employee training programmes to develop skills required by advanced technology.

(c) Maintain an adequate salary plan to retain and attract specialists in the face of competition from other industries.

5. Involvement in regulatory processes will be minimized in terms of the assignment of personnel and costs.

6. Regulation will not dilute management's prerogatives for individual company initiative in the decision making process.

4. RECOMMENDATIONS FOR REGULATION

(a) General

Special technical and economic considerations present in the telecommunications industry require some form of public regulation. Most basically this industry extensively employs a scarce public resource -- the radio frequency spectrum. Sound exploitation of this resource requires comprehensive and coordinated public supervision. To be fully effective, the supervision must encompass all activities that use the radio spectrum.

The major economic consideration giving rise to the need for regulation is that the scale of economies of production in telecommunications are such that optimum facility sizes required are often very large and the opportunities for competition consequently restricted. Public regulation is needed to supplement normal market forces, which by themselves may not assure industry performance in the public interest. In particular, regulation is needed

- to prevent uneconomic market segmentation resulting in wasteful duplication of facilities and
- to assist in the maintenance of fair and equitable prices to avoid non-compensatory prices harmful to competition.

To be effective, economic regulation must cover all telecommunication activities, whether public or private, regardless of the type of facilities over which they are provided. Telecommunications technologies are to a degree substitutable and consequently present competitive alternatives for providing services. Moreover, telecommunication markets tend to overlap: the building of a private system may affect the demand for public service and thereby the scale and cost at which it can be offered; the establishment of satellite telecommunication facilities will affect the demand for and use of microwave and coaxial cable facilities.

Although public regulation should encompass all telecommunications activities, its function should be limited to supplementing the controls usually provided by market forces. Insofar as possible, regulation should seek to protect and encourage competition so that business decisions and behavior are guided by market forces rather than direct government control.

Comprehensive regulation of company performance in the industry is unnecessary and ill advised. Even for so-called "monopoly" services in telecommunications, market forces provide some regulation since, at some point, other communication modes become feasible substitutes.

Always present in addition is the effect of general competition for the consumer dollar. For competitive segments of the industry regulation by market forces is even more effective.

Short of public ownership, telecommunication company management should have responsibility for company operations and financial soundness. Management is in the best position and is likely to have the greatest insight and information to provide sound control and direction of company activities. Within the limits set by the regulatory agency's responsibility for maintaining efficiently-sized production units, competition, and fair prices, management should have control over planning, research and development, new services, service extensions, finance, marketing, employee relations, and all other operating and investment concerns.

(b) Jurisdictional Environment

A major difficulty exists today in Canada with regard to the division of responsibility for telecommunications regulation as among federal, provincial and local authorities. Federal jurisdiction, and therefore federal regulatory authority, can arise under the British North America Act in one, or a combination of, three forms:

(a) creation of a telegraph or telephone company by Special Act;

(b) control over telegraph lines or telephone works or undertakings extending beyond provincial boundaries or connecting with another province;

(c) a declaration that a work is for the general advantage of Canada.

In the case of the principal telecommunications companies now regulated by the Canadian Transport Committee (CN-CP, Bell Canada, B.C. Telephone Company) federal jurisdiction arises either from the fact of federal incorporation as a telegraph or telephone company, or from the power given to railways by Sections 372 and 374 of the Railway Act to construct and operate telegraph and telephone lines upon the Railway, and to charge tolls for telegraph and

telephone messages. The Special Acts of two federally controlled carriers (Bell Canada and B.C. Telephone Company) declared the works of the Companies to be for the general advantage of Canada. In respect of the telecommunications carriers subject to federal jurisdiction, services rendered by these carriers -- whether local, intra-provincial or inter-provincial -- are all regulated by the same federal authority. All other major telecommunications companies in Canada are subject to provincial legislation and regulated by local authorities.

This jurisdictional pattern inevitably leads to the application of conflicting regulatory policy to similar services provided in the same telecommunication markets by different carriers. For example, the intra-provincial toll services provided by federally regulated carriers may be subject to different cost allocation procedures, earnings limitations, accounting methods and service standards than are the same services provided by provincially regulated carriers. Likewise inter-provincial services may be differently regulated depending upon whether they are provided by a federally regulated carrier or through interconnecting provincially regulated carriers. The problems of overlapping jurisdiction may be particularly

acute in those service areas where national policy might favor a competitive institutional structure. In this instance federal and provincial regulatory agencies may find themselves tempted to unduly favor carriers subject to their jurisdiction as against those subject to other jurisdictions.

Several different jurisdictional patterns offer possible solutions to the problem. The British North America Act with respect to telecommunications is subject to three distinct interpretations:

1. The first interpretation confirms the exclusive jurisdiction of the provinces over provincial companies even if they connect two provinces and federal authority over companies declared to be for the general advantage of Canada or companies whose works cover more than one province. In other words, the solution offers a perpetuation of the existing divided jurisdictional pattern.

2. The second interpretation supports the view that each province has jurisdiction limited to telecommunications within its borders over provincial companies, whereas inter-provincial telecommunications and agreements respecting them between

companies, as well as all telecommunications activity handled by companies such as CN-CP and Bell Canada, are matters for federal jurisdiction. In this case, control over practices harmful to competition would be increased, but a potential gap would still exist because of inconsistent regulation among different jurisdictions. Some jurisdictions may allow, by leniency in rate regulation of monopolies, greater opportunities for cross-subsidization than others. In order to make effective cost allocations each regulatory body must as a minimum have access to information covering a carrier's entire telecommunications operations.

3. The third interpretation would give the federal government total and exclusive jurisdiction over all companies which are connected to one another at provincial borders.

Clearly, the tidiest and most comprehensive solution entails implementation of the third interpretation which, in effect, would subject all significant telecommunications services to federal regulation. As Mr. Kierans said before the Standing Committee on Transport and Communications in proceedings respecting Bill C11:

"The fundamental problem is that it is difficult, if not impossible in practice, to determine what is just and reasonable with regard to rates and conditions of service for certain of a telecommunications company's offerings, without knowing about the relative profitability of other services offered by that same company. This, in turn, is because under conditions of jointly produced services, it is possible for a company to discriminate in its charges against certain classes of customers - it is possible - to the advantage of other groups enjoying more favourable rates. In the case of a public utlity like telecommunications, where telephone and telegraph services are provided under conditions of natural monopoly, the subscribers to these services are vulnerable to discriminatory pricing and that is why natural monopolies are regulated in every country that one can think of. These customers must be protected not only from excessive charges that monopolists might find it possible to extract from customers who have no recourse to other suppliers, they must also be protected from charges which may be used to subsidize other services offered by the same company under conditions of active or extreme competition.[1]"

(1) 18 November, 1969, page 1-13 of Text.

Federal jurisdiction over all telecommunications services would go farthest toward achieving the major objectives of regulation -- the prevention of harm to competition and of injury to customers.

(c) Function of a Regulatory Authority

1. Entry -- License to Establish and Operate Telecommunications Facilities

All persons who would engage in any type of telecommunications activity, whether as a Telecommunications Carrier or for private use, should be required to file for authorization with the regulatory authority. Applications should describe the proposed service, the area to be served, and the public interest in the establishment of the service.

The regulatory authority should be governed by public interest and need in determining whether to approve or disapprove an application. In determining public interest and need, the principle should apply that competition is to be preferred over monopoly and new entry over exclusion, except when competition or new entry can be demonstrated to cause uneconomic market segmentation or inefficient use of the radio frequency spectrum.

An applicant's description of a proposed service should include detailed information on its functional and technical characteristics and the purpose or demand that it is expected to fulfill.

Functional characteristics relate to such factors as communications mode (voice, record, or video), speed, accuracy, quality, fidelity, and related matters. Technical characteristics relate to the means by which a service is provided -- microwave, coaxial cable, paired wire, satellite, etc. -- as well as bandwidths involved, channal capacity used, etc.

In determining public interest and need in respect to a new service, the regulatory authority should consider:

- When the service is directly competitive with an existing service or services, whether in view of economies of scale, competition is warranted or when competition already exists, whether an additional competitor is desirable; and

- When the service basically meets new or specialized requirements not provided for or well provided for by existing carriers, whether the requirements can be most efficiently met through new facilities or through existing facilities that may be under-utilized or might

be expanded with savings in economies of scale.

In view of the current size of the telecommunications market in Canada and existing telecommunications technology, the number of Telecommunications Carriers for the present should continue to be limited to the telephone system and CN-CP Telecommunications as the best compromise at this time between economies of scale and competition.

Private telecommunication systems (provision of service for one's self) should be authorized only to the extent that Telecommunication Carriers are unable to provide service on request at a price no higher than costs that the applicant can demonstrate he can achieve.

Except in cases of misuse, illegal purpose, or non-payment, a Telecommunications Carrier should be obliged to provide and continue to provide authorized services throughout approved areas, subject only to the limitation that suitable distribution facilities exist or that there is effective demand. Effective demand means demand at compensatory prices.

In approving and disapproving applications, the

regulatory authority should take into account the financial and technical qualifications of applicants to provide dependable service at suitable performance and quality levels. Due consideration should be given the capital investment required and the capability of the applicant to provide or raise the necessary funds. The applicant's experience in telecommunications, or his access to experienced personnel, is relevant in determining technical qualifications.

The regulatory authority should consider the following points in approving or disapproving the area included in the application, or in proposing a modification:

- The geographic or size parameters of an efficient service of the type proposed.

- Willingness and ability of the applicant to satisfy, with reasonable dispatch, the effective demand for the service within the proposed area.

- Another carrier's (or carriers') interest in providing the service for the whole or parts of the proposed area and its efficiency relative to the applicant in providing the service.

- The overall size of the activity if there may be diseconomies of scale in management or finance, or if large size may present an undesirable concentration of economic control. Such disadvantages of large scale must be weighed against the possible economies in the operation of integrated facilities and in coordinated planning, research and the introduction of new services.

Because of the impact of new entry in the provision of Telecommunications Services, it should be incumbent on the regulatory authority, to consult with existing Telecommunications Carriers prior to approving new applications.

2. Administration of Radio Frequency Spectrum

A central authority for determining the uses and users of the electromagnetic spectrum is essential in any industrialized country today as a result of the growing scarcity of spectrum availability relative to the demand for spectrum use. Responsibilities of any such administrative authority should include:

- Allocation of frequency bands;

- Assignment of specific frequencies and call signs;

- Establishment of transmission standards, for example, requisite frequency stability, power levels, signal bandwidth, antenna propagation characteristics, modulation methods;

- Field monitoring to detect illegal transmission and sources of harmful interference;

- Coordination of frequency assignments with established international standards-making bodies;

- Research of techniques for making more efficient use of the electromagnetic spectrum;

- Granting or denial of licences to use radio frequency spectrum in accordance with defined criteria.

The objective of sound spectrum management is to achieve that combination of spectrum uses which, in the aggregate, maximizes the contribution of of this resource to the broad range of public, commercial and individual services and activities

that employ, or might potentially employ, radio communications.

The administrative authority should seek the help of users in establishing general spectrum allocations. Economic as well as technical factors should be taken into account. The comparative demand among uses is relevant in setting allocations as is the availability and feasibility of alternate means for providing particular services that do not use the radio spectrum.

To promote and encourage competition, Telecommunications Carriers should have the right to frequency assignments in acceptable portions of the radio spectrum, subject only to technical considerations and suitable coordination.

3. Quality of Service and Service Continuity

A Telecommunications Carrier should provide service having satisfactory quality and continuity characteristics. These characteristics should be relatively uniform under substantially similar conditions.

The expectations of the public with respect to quality and continuity of service are continuously rising.

A carrier should plan the development of its systems and operations to meet these expectations.

A carrier should set understandable performance objectives for its systems, which are just and reasonable to the carrier, the customers and the regulator. The achievement of these objectives should be reviewed periodically with the regulatory authority.

The regulatory authority should have the responsibility to act on customer complaint to ensure that the quality of service as defined by the carrier is being provided.

4. Rate Regulation

In respect of rate regulation, CN-CP oppose pricing policies based on Company wide costs. Insofar as it is considered necessary to regulate rates, regulation should be on an individual class of service basis.

One of the major undesirable effects of overall rate-base, rate-of-return, regulation is that it permits and

often encourages cross subsidization among the various classes of services offered. There are several economic ills that may result from cross subsidization particularly in cases where carriers are supplying monopoly as well as competitive services.

- Productive resources of the industry may not be allocated in the most efficient way, e.g. the diversion of capital to meet competition which might be more efficiently used to provide other services.

- Cross subsidization can be harmful to competition where a carrier can cut prices below cost, making up the difference from profits earned in other markets, while competitors may have to cover all of their costs in the competitive market. This causes inequitable rates for various classes of service whereby consumers of some services are subsidizing the consumers of other services.

Thus where it is felt necessary to examine and perhaps limit earnings of a Telecommunications Carrier, the regulatory authority should approve or disapprove

rates on the basis of separate classes of service.

Tariffs

Every Telecommunications Carrier should be required to file tariff schedules for all of its service offerings (public and private) for regulatory review and public information. These schedules should show the charges, areas served and conditions applying to the use of the service. To provide sufficient time for regulatory review and objection by customers or competitors, tariffs with one exception should be filed prior to their effective date according to time periods specified by the regulatory authority. Rate changes in existing tariffs should automatically come into force on the effective date unless disallowed or temporarily suspended for a specified period of time by the regulatory authority on its own initiative or in respect of a challenge. The exception to the foregoing arises when a Carrier must immediately reduce its rates to meet an offering by a competitor under Federal or Provincial jurisdictions. This means that such competitive tariffs need not be filed before becoming effective.

New tariffs should automatically come into force on the effective date even if under review by the regulatory authority.

The regulatory authority should review rates and rates-of-return by class of service and not on an overall company basis. The latter method would tend to conceal cross subsidization which may be harmful to competition and should therefore be strictly avoided.

The authority should apply utility-type rate regulation only to monopoly services. The authority should examine the costs and revenues for these services in adequate detail to assure that price levels on these services are generally reasonable and that carriers are not making exceptional profits.

Strict utility-type rate regulation should be applied only when absolutely necessary because of its potentially highly adverse effects:

- Decreasing management incentives for cost control, innovation, sales maximization, and encouraging expenditures on management prerequisites and corporate image development;

- Providing incentive to overinvest in capital-intensive innovation and techniques;

- Restricting output, creating the need for "rationing";

- Preventing the introduction of new services which, although economically feasible, are not attractive for the supplier to offer at the established price level.

The extensive experience of the United States with utility-type rate regulation, which is widely regarded as having been highly unsatisfactory, confirms these problems. Transportation is a special case in point but major problems are now emerging or have virtually arrived in electric power, natural gas, and telephone.

Whether because of this experience or because of changes in technology that may permit more competition or a combination of these factors, the present attitude in the United States on the organization of telecommunication activities is for more reliance on competition and less on direct utility-type regulation. Evidence of this shift in emphasis may be seen in the decisions in the Carterfone and MCI cases, the

U.S. Administration's recently announced policy on domestic satellites, and the prevailing philosophy of the Report of the Presidential Task Force on Communications.

Markets are smaller in Canada and the possibilities for competition are less. Nevertheless, the experience of the U.S. supports a strong case for maximum reliance on competition although it must be in a regulatory framework that would protect and promote that competition as well as would control or direct decisions and activities for which competitive forces are inadequate.

Utility-type rate regulation is generally unnecessary for competitive services because under competitive market conditions, the danger that exceptionally high profits can occur and continue is less. Rate regulation for such services should be largely confined to protecting against non-compensatory rates harmful to competition or unfairly discriminatory among customers. Rates on monopoly services should be subject to disallowance on these same bases.

The regulatory authority should allow cost averaging and value-of-service pricing when either pricing

technique is not harmful to competition or unjustly discriminatory among customers, and when it may promote the development of a service, convenience in pricing, or other favorable result. Cost averaging is the offering of a service at a single price although the costs to provide service to various customers differ. Value-of-service pricing is charging different customers or classes of customers the amount that each is willing or able to pay.

A carrier should be permitted to offer a competitive service at the rate published previously by a competing carrier, whether or not that rate is compensatory for the new carrier. This is a necessary condition to allow more than one offeror of the service. The responsibility for showing that the rate is compensatory, if the rate is challenged by a competing carrier or regulatory authority, lies with the first carrier that publishes the rate. If the first carrier later raises the rate, other carriers for whom the rate is non-compensatory must do the same.

The carriers, in cooperation with the regulatory authority should develop uniform methods of cost

accounting and cost separations for purposes of tariff review. A tariff filing for a monopoly service should include sufficient cost detail according to the established system of accounts to enable the regulatory authority to determine the reasonableness of the tariff. A tariff filing for competitive service should require the inclusion of only broad cost information. Upon complaint, however, the carrier should have to establish in a complete way the validity of the tariff, as being compensatory or non-discriminatory, according to the nature of the complaint.

A study undertaken by the U.S. Federal Communications Commission a few years ago underscores the importance of regulatory supervision of rates to protect competition. In the "Seven-way Cost Study" the Bell System was requested to undertake an extensive inquiry to ascertain its interstate investment, revenues and expenses and net earnings, among seven service categories. Detailed procedures were developed for the allocation of investment and expenses among particular categories of service, generally based on the principle of relative usage. Analyzed in terms of total day usage for a 12-month period from September

1, 1963 to August 31, 1964 the following results were reported:

Category of Service	Net Operating Revenues (Thousands of Dollars) (A)	Net Investment (B)	Percentage of A to C	Percentage of A to B
Message Toll Telephone	426,723	4,286,702	86.7	10.0
Teletypewriter Exchange Service	6,795	237,584	1.3	2.9
Wide Area Telephone Service	30,684	303,004	6.3	10.1
Telephone Grade Private Line	17,137	362,758	3.5	4.7
Telegraph Grade Private Line	4,414	313,324	0.8	1.4
Telpak	1,662	564,742	0.3	0.3
All Other	5,174	490,292	1.1	1.1
Total	492,589 (C)	6,558,406	100.0	7.5

On the basis of these figures, Western Union charged that the Bell System used its monopoly voice service to subsidize its competitive telegraph and private line offerings. Reservations or limitations believed pertinent to

the findings and set forth in subsequent testimony were noted by the examiners, but they did not invalidate or alter the evidence on which Western Union based its charge.

Services Classifications

As the initiative for the submission of tariffs rests with the carrier, so should the classifications of service offerings contained in the tariffs. As a general rule, carriers should file separate tariffs for distinguishable services in order to facilitate separate consideration and review of each by the regulatory authority. Moreover, carrier service classifications are important matters for public disclosure because they relate directly to the structure of the industry and competition in prices and services. All carriers should have ample opportunity to review all proposals for new service classifications submitted by other carriers and to file objections when a new classification is believed to be unfairly harmful to competition or discriminatory among customers. The regulatory authority should have the final administrative responsibility for working out conflicts among carriers and disallowing inappropriate classifications. The regulatory authority also should be

able to undertake reviews of proposed new classifications on its own initiative.

Contracts and Agreements

Carriers should be required to file with the regulatory authority copies of all contracts and agreements with other carriers and customers. These contracts, which are private in nature, should not be a matter of public record. Contracts between carriers and non-carriers generally provide for long-term arrangements to supply special services or to construct facilities when not warranted by general public need.

The regulatory authority should have the same authority for review and apply the same criteria in the evaluation as it would if the tariff were public. The regulatory authority should review intercarrier agreements in order primarily to insure the reasonableness of their terms, particularly when one carrier must rely upon a monopoly service only offered by another carrier (e.g., the exclusive provision of local loops by telephone-operating companies).

(d) Regulatory Principles

The following five sections outline policy principles which should be applied by the regulatory authority in regulating tariffs and financial settlements for services in the Telecommunications Industry. The principles enumerated are meant to guide the discriminating application of the regulatory procedures and practices outlined in the preceding section.

1. Overall Rate-Base, Rate-of-Return Regulation Should be Avoided

In stating the principle that overall rate-base, rate-of-return regulation should be avoided, it is not meant that the earnings of a regulated monopoly should not be subject to some regulatory limitation, rather, that any such limitation on earnings should be effected by means other than the overall company-wide "profits" regulation traditionally employed.

When regulation was first introduced in a major way, emphasis was placed on reviewing the structure of rates rather than on overall company profits. In time, however, the goals

of regulation shifted in an attempt to simulate the results of competition. Consequently, regulatory effort was focused on the promotion of inter-industry competition and on the limitation of overall company profits to "competitive" or "comparable" levels. This process of rate-base, rate-of-return or level-of-profits regulation has been described as follows:

> "The heart of the process is the determination of the overall revenue requirements of the regulated firm. A test year (ordinarily the most recent typical year of operations for which complete data are available) is selected and the firm is asked to submit its operating and other expenses for that year. The regulatory commission reviews the submission and may disallow expense items that either were imprudently incurred or are not properly expenses -- for example, an excessive depreciation allowance constituting a disguised return to investors. The allowed cost of service includes an allowance for a "fair return" to stockholders and

bondholders who have provided the capital used to render the regulated service. That allowance is computed by multiplying the company's rate base -- either the depreciated original or the replacement cost of the assets used in rendering the service -- by the "fair rate of return," a composite percentage made up of the interest the corporation must pay bondholders and the estimated cost of attracting and holding the necessary equity capital. The firm then files a tariff schedule designed to enable it to just cover its cost of service including the return allowance."

In some industries, notably trucking, the rate-base, rate-of-return method is not used, and instead the regulated firm is allowed a percentage of its expenses as profit. ..... The larger the firm's expenses, the greater the return to the stockholders, assuming no increase in capital costs. The firm thus has an incentive to incur excessive operating costs, comparable to the incentive of the rate-base regulated firm to incur excessive capital costs. ....

The determination of a company's costs and rate base and the ascertainment of a fair rate of return involve sufficient complications to discourage the most zealous regulatory agency from conducting such proceedings continuously or even frequently. Commonly, several years elapse between proceedings, and in the interim periods the firm's costs may change from those of the test year. If they decline the firm's profits will increase, because the rate schedule fixed in the last proceeding remains unchanged until the next proceeding. Ordinarily, the firm can retain such profits, even though they exceed the fair rate of return previously determined. If costs rise, the firm will seek and usually obtain the agency's permission to file revised tariffs.

Although the regulated firm normally enjoys substantial latitude in choosing a combination of rates for specific services that will just yield its overall revenue requirements, regulatory agencies do have comprehensive power over specific rates. An agency may disallow a rate if it is "unjust" or "unreasonable" or "unjustly

> discriminatory." If a competitor or customer of the regulated firm complains about a specific rate -- that it is unjustly low (in the case of the competitor) or unjustly high (in the case of the customer) -- the agency will hold hearings and, proceeding much like a court, decide whether the complaint has merit. If so, it will order the regulated firm to revise its rate structure.[1]

The type of regulation described above is commonly thought to have a number of undesirable characteristics and effects.

First, the strength and weakness of level-of-profits regulation varies considerably with cost trends which are largely fortuitous and bear no relation to genuine regulatory needs. That is to say, if costs are generally falling for a regulated firm, the regulatory authority will have little effective constraint on profits until the fact of falling costs has been detected and measured. On the other hand, if costs are generally rising, then the regulated firm will come to the regulating authority

1 Richard A. Posner, "Natural Monopoly and Its Regulation," Stanford Law Review, Vol. 21: pages 592-593.

with a request for rate increase. In this instance the authority has considerably more control over profit levels and may even constrain profits too tightly.

Second, profits regulation tends to discourage efficiency because it is based on a cost-plus-profit principle. If regulatory adjustment of profits is swift, the gains derived from cost reductions will be quickly snatched away while slack firms with inflated costs will not be penalized by lower profits. In practice, of course, regulatory adjustments have not been swift and "regulatory lag" has been credited with encouraging cost reductions and discouraging cost inflation. It is an odd circumstance when it can be said that regulation works best where it is slow and ineffective.

Third, rate-base, rate-of-return regulation will tend to distort the allocation of resources by excessively increasing the use of capital in both investment flows and production techniques.

When the allowable rate of return is above the market cost of capital, the regulated firm may be able to earn a profit for each additional unit of capital input the firm employs that it otherwise would have to forgo. This type of regulation has the effect of changing for the regulated firm the relative prices of capital and

other inputs like labor so that the firm does not minimize its market costs at any given output. Moreover, while regulation, by limiting a firm's monopoly profits and prices, is designed in part to prevent the firm from restricting output, the resulting shift in the average cost function due to the inefficient substitution of capital for labor will cause output to be expanded only part way to its optimum competitive level.

The increased willingness to absorb extra capital that the above theory implies may appear in utility practice in several ways. Profit-regulated firms have less incentive to buy capital goods cheaply and may tend to place a greater emphasis on quality rather than economy. The incentive to merge with equipment suppliers increases; and capital intensity of production is increased beyond the economic margin.

In addition to substituting capital for labor in production at any given output level, a regulated firm will be motivated to acquire additional capital to enter new regulated markets even though the cost of doing so may exceed the revenues. This will occur if the regulatory authority computes "fair rate of return" on the firm's

overall value of plant and equipment and if "fair rate of return" exceeds the cost of capital. Operating in a second market will permit the firm to earn a greater total retained profit than by limiting its activities to a single area. The development and saturation of new regulated markets and the extension of existing markets is encouraged by rate-of-return regulation. Such growth might not be justified on its own terms -- thus requiring cross subsidizing from existing markets -- and might put a strain on the availability of capital for improving the quality of service in existing markets.

A significant implication of this tendency to enter new markets is that such a regulated firm may have an unwarranted advantage over competing firms in oligopolistic markets. Here, a regulated firm could "afford" to take long-run losses in these second markets, thus conceivably driving out lower cost producers, without ever charging monopoly prices in the second markets. Nonetheless, potential -- even lower-cost -- competitors would be driven out or discouraged from entry.

2. Tariffs Should be Regulated by Class of Service

The policy principle set forth here is in a sense a corollary of the preceding one. That is, insofar as it is thought necessary to limit earnings through regulation, ceilings should be placed on tariffs on an individual-class-of-service basis. One of the major economic effects of overall rate-base-rate-of-return regulation is that it permits and often encourages the regulated firm to cross subsidize as among the various classes of service offered. There are several economic ills that result from cross-subsidizing.

First, the productive resources of the industry are not allocated in the most efficient way. Too much of some services and too little of others are provided. Thus, the overall social welfare is diminished unless the stimulative effect on output and costs by pricing below costs for the subsidized service is equal to the restrictive effect upon output and costs by pricing above costs for the subsidizing service. The assumption is highly unlikely to reflect economic reality. On the contrary consumers are more likely to benefit as a whole from an allocation of productive

resources which is more responsive to their relative valuation of services.

Second, cross subsidizing has a harmful effect on competition where one firm can cut prices below costs by making the difference up out of profits earned in monopoly markets while competitors may have to cover all their costs in the competitive market.

Third, cross subsidizing is often inequitable. As a general matter, it is fair for consumers to pay the cost of what they purchase. Insofar as the consumers of some services are subsidizing the consumers of different services, this general principle is violated. If there are circumstances in which a subsidy seems socially desirable then it should be made openly by government. For government to allow the management of a regulated monopoly to determine what subsidies will be in the public interest is an unjustifiable delegation of its responsibility.

Thus, in limiting the earnings of a telecommunications carrier, the regulatory authority should look to the cost details of individual services and make adjustments in the proposed tariffs by class of service accordingly.

3. "Monopoly Profits" Are Not Necessarily Excessive. Thus the Case for Tariff Ceilings Varies From Service to Service

Even a "monopolist" may be constrained by various circumstances from charging excessive prices. First of all, a "natural monopolist" is a rarity for there are elements of competition or substitutability which over time, at least, will threaten a monopolist's unique position. In addition, technological changes in the nature of production or shifts in demand characteristics can also remove the elements of a monopoly. But most important, the price-elasticity of demand, for even a national monopolist, may set limits on the extent to which he can restrict output and raise prices. If demand is highly price elastic, the monopolist is considerably constrained in his ability to charge excessive prices.

It is important for the regulating authority to make distinctions between circumstances in which a carrier may be in a position to charge excessive prices and those in which he is already constrained from doing so by factors beyond his immediate control. Such discrimination is important because the process of setting tariff ceilings in order to prevent excessive prices is itself costly and, more important, has negative

effects. Almost every method for setting ceilings on rates involves assessing what constitutes a reasonable profit which in turn requires an examination of capital investment and rate of return on invested capital. As already pointed out in the first part of this section, any rate-of-return regulation -- even if applied by class of service and to individual markets -- tends to discourage efficiency and to encourage over-capitalization in both investment flows and production techniques.

For these reasons, strict regulation of specific tariffs should be employed both sparingly and discriminatingly. It would appear, for example, that the dangers of serious monopoly profits are greater in the local exchange telephone service where substitutability is limited and demand is rather price inelastic than in inter-city private-line services where more than one carrier operates in many parts of Canada and where demand is probably more sensitive to changes in price. In local exchange service, the trade-off between protecting consumers from excess profits and discouraging efficiency and optimal resource allocation may be in favor of stricter regulation of rates. In inter-city private-line service, on the other hand, the trade-off may well work in the opposite

direction suggesting that the regulatory authority not attempt to regulate rates.

4. Price "discrimination" that harms competition or is unfair to customers should be prohibited. Care must be taken, however, that reasonable price differentiations are not discouraged.

Price discrimination is generally regarded as evil because the case that most often comes to mind is that of a big, economically strong buyer paying less than an impoverished weak one for identical services. The essential aspect of price discrimination does not involve a comparison of consumers and prices paid but rather the relationship between price differentials and cost differentials. "Where price differentials represent cost differentials, they are not discriminatory; where price differentials do not represent cost differentials, they are discriminatory."[1]

The principal evils associated with price discrimination are unfairness to customers and harm to competition. When one customer subsidizes another, the principle that each consumer should bear his own share of the costs is

1 H.H. Trebing and W.H. Melodly, "An Evaluation of Domestic Communication Pricing Practices and Policies," President's Task Force on Communications Policy. Appendix A, p. 15

violated. Harm to competition results when revenues from one service subsidize below-cost prices in another service to the harm of a competitor in the second service. In addition, of course, when prices do not reflect the true costs of production, production resources will be misallocated and the overall social welfare reduced.

Both "cost-averaging" and "value-of-service" pricing tend to be discriminatory and should be prohibited unless countervailing considerations are present. It may, for example, be declared government policy to subsidize phone rates in high cost rural areas through cost averaging. Such trade-offs should be made expressly.

There is another circumstance in which carriers might be allowed freedom to differentiate their prices even to the point of employing "value-of-service pricing." If the regulatory authority had decided that the trade-off between excessive profits and the inefficiencies of rate-of-return rates regulation operate in favor of unregulated tariffs for a particular service provided on a

monopoly basis, then the carrier which charges a number of different prices will cause less waste of resources than the carrier which charges a single monopoly price.

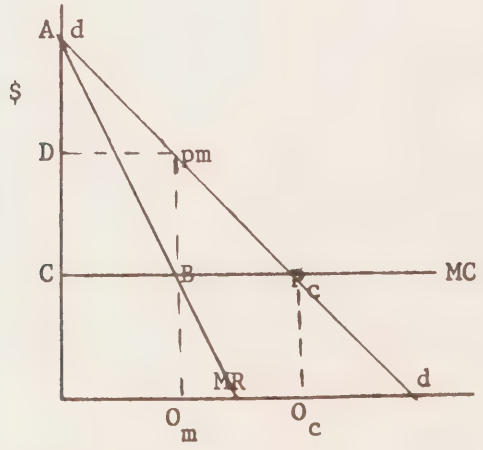
This point is made clear by the following considerations. Firms in a monopoly market are likely to charge prices above some competitive, minimum long-range average cost price and to restrict output accordingly with the resultant effects on income distribution and resource allocation efficiency. Those who oppose regulation as a means of adjusting this effect, assert that a monopolist is able to capture only some of the consumer surplus if he charges a single price for his product or service. If, however, a monopolist is able to differentiate among customers perfectly -- and history suggests that monopolists are strongly motivated to use value-of-service pricing -- then he will be able to extract all of the consumer surplus, and he will not restrict output to the point where marginal revenue equals marginal price but will produce as much as would have been produced by a competitive situation. In this case there is no allocative inefficiency because all consumers for whom the utility of the product exceeds its cost

of production are able to obtain what they want.[1]

[1]A graphic explanation of these ideas is given in footnote 6 of Richard A. Posner's article "Natural Monopoly and Its Regulation," Stanford Law Review, Vol. 21: Page 548, 196. Posner states:

> The concept that monopoly pricing causes welfare losses, illustrated in the text by a rather stylized arithmetical example, can also be represented, and perhaps more clearly, graphically. Let "dd" be the range of prices at which various quantities of widgets will sell -- in other words, the demand schedule for widgets. Under competition it is evident that the equilibrium price is p_c and output 0_c; for at any higher price additional output could be sold at a remunerative price -- a price that exceeded the cost of the additional output (marginal cost or MC) -- while at any lower price cost would exceed revenue. When P_c is the price charged, consumers' surplus equal to the area Ap_cC is generated, representing the additional amount that consumers could be made to pay for widgets under a system of perfect discrimination.

A monopolist, on the other hand, would be free to restrict his output to O_m and charge the higher price p_m, the point from which any further reduction in price would generate less additional revenue (marginal revenue or MR) than additional cost. At that price consumers' surplus is reduced to the area Ap_mD and the monopolist appropriates the area Dp_mBC as monopoly profit or producers' surplus, resulting in a net diminution in welfare of p_mp_cB. That area represents the "deadweight loss" of monopoly -- the part of consumers' surplus that the monopolist cannot appropriate but that the consumers lose. One should note, however, that his model of monopoly performance is highly simplified; for a number of refinements besides those I shall discuss in the text see J. Robinson, The Economics of Imperfect Competition, 143-58 (1933).



(Figure 1)

To be sure, a monopolist who employs value-of-service pricing or price discrimination is redistributing income more than would occur in a single-price competitive market. Nonetheless, those who oppose adjustment by regulation assert that in some circumstances this redistributive result may be quite acceptable. For example, value-of-service pricing is likely to require the rich to pay more than the poor which might not be considered any more offensive than an Italian-style haggling system. Moreover, any unacceptable redistribution of income might be remedied by adjusting the tax structure rather than establishing regulatory controls.

Thus, in general, price discrimination should be prohibited when:

- inconsistent with the development of competition in the selected mode;
- significantly harmful to customers;
- significantly distortive of the amount of various services that would be provided by the absence of competition.

There may, however, be circumstances in which price

discrimination may be considered reasonable in the light of countervailing objectives.

In addition, of course, telecommunication carriers must be free to classify their services according to such factors as amount used, the time when used, the purpose for which used, etc. in order to make price differentials which reflect varying cost conditions. For example, service that adds to peak load should be charged differently from service that merely increases utilization of existing capacity.

5. Tariffs and Financial Settlements Should be Filed and Subject to Review

Carriers should be required to file tariffs for all service offerings. Such tariffs should indicate terms of service and rates. In addition copies of all financial settlements of carriers for special contract or negotiated services should be filed with the regulatory authority. Unless otherwise acted upon by the regulatory authority, tariffs should become automatically effective at a reasonable time after they have been filed.

The scope of review of tariffs should be influenced by the principles outlined above and as indicated should

vary according to whether or not the tariff is for a service provided by a monopolist. Tariffs should be subject to challenge by competing carriers and customers as well as by the regulatory authority on grounds of harm to customers by discriminatory rates and harm to competition by non-compensatory rates.

It should be emphasized that the danger of non-compensatory pricing is considerably reduced if the authority avoids overall rate-base, rate-of-return regulation. Under such regulation, the carrier's overall profits are limited and it is more or less a matter of indifference as to what levels of profit are earned in individual services as long as the overall profits do not exceed the allowed maximum. Under such incentives a carrier may well earn very high profits in a monopoly service while suffering losses in other services where competitors are being eliminated. If each service category must stand on its own feet, however, a carrier will be motivated to engage in predatory pricing only if the losses can be subsequently recovered once competitors have been driven out. If prices are then subsequently raised to offset the former losses, the conditions for new competition will reappear.

5. RECOMMENDED STRUCTURE OF THE REGULATORY AUTHORITY

On the federal level, Telecommunications Services are regulated primarily under selected sections of the Railway Act. While the Minister of Communications is responsible for the subject of telecommunications systems and facilities in Canada, the Railway Transport Committee of the Canadian Transport Commission (C.T.C.) provides the staff which exercises regulatory control over telecommunications. The C.T.C. as a creature of statute may only exercise whatever authority is conferred on it by Parliament. To some extent, C.T.C. is handicapped through the absence of effective regulatory tools. Parliament, within a milieu of transportation regulation, has given C.T.C. mainly a toll jurisdiction over communications. The regulatory mandate of the C.T.C. appears to be one of ensuring that tolls are just and reasonable and free from unjust discrimination or undue preference. This type of regulatory control may have once worked well in respect of telephone and telegraph services only, but conditions in the industry have changed significantly and Parliament has recently sought to extend regulation to the whole known spectrum of telecommunications services and facilities.

The regulatory authority of tomorrow must have the

statutory power and the administrative determination to consider and act upon such issues as tolls, licenses, frequency spectrum allotment, quality and continuity of service, predatory pricing and cross subsidization between classes of service. In short, the regulatory authority must have the duty to implement two fundamental objectives i.e. the prevention of harm to customers by discriminatory rates and the prevention of harm to competition by non-compensatory rates.

Insofar as the structure of the regulatory authority is concerned, the new (Telecommunications) Act ought to address itself to the creation and establishment of a regulatory Telecommunication Commission, with the ability to exercise effective control over telecommunications. The Telecommunications Commission (T.C.) must have the statutory power, expert professional resources and funds necessary for effective regulation. Hopefully, Parliament will assert its proper constitutional claim over telecommunications services and rendering them subject to unitary federal control by the T.C. Effective regulation of Telecommunications Services in Canada requires an end to jurisdictional divisiveness and conflicting regulatory policies and procedures - a glaring defect of meaningful telecommunications regulation today.

The three major functions assigned to the Telecommunications Commission -- administrative, policy making and adjudicative -- should, wherever feasible, be clearly separated within the T.C. For example, those who sit in adjudication should be independent from the prosecuting arm of the regulatory authority. Similarly, those who are involved with the formulation of policy should not exercise the adjudicative function.

National policy should be left to the legislative devices of Parliament; achievement of telecommunications policy expressed by the law in terms of the public and the industry should be the sole concern of the T.C. The T.C. must resist using Telecommunication Carriers to accomplish certain national policy objectives. The T.C. should not be put into a position where a serious conflict of interest can exist, or appear to exist. For example, the T.C. should not be called upon to advise the government on matters like investment in telecommunications facilities or subsidies to carriers on the one hand and be called upon, on the other hand to adjudicate questions of service extensions or compensatory rates.

If the effectiveness of the regulatory authority is to reach maximum potential the Commissioners of the T.C. should

be isolated from political pressures and the Commission aided against becoming a cog in the machinery of the government. In short, the T.C. must be independent. Ad hoc Commissioners must be appointed quickly when illness or overload threaten. The T.C. must be structured to avoid or minimize costly regulatory delay which can postpone or deny justice. The T.C. should be organized to cope with and meet target dates and deadlines. No decision should be unissued after a lapse of months (say 18-24). Hearings before the T.C. should have one lawyer in attendance for the T.C. as a Commissioner who shall have sole jurisdiction over questions of law. The lawyer should be appointed under the provisions of the Judge's Act. An appeal from any decision, judgement or order of the T.C. should only exist to the Federal Courts on matters which are not questions of fact alone. Appeals to the Governor-General-In-Council should not exist because recourse to political tribunals could inhibit the Commission and prevent the impartial and judicial exercise of powers. The T.C. should be organized to entertain most hearings informally in substitution for the more formal adversary type proceedings. Prehearing conferences should exist to determine areas of agreement

and of dispute. The use of previously prepared and published testimony should be permitted to limit trial examination. Dialogue through conferences must exist between the suppliers of communication services and the T.C. to avoid over-regulation or mis-regulation because of the inability of regulatory policy and procedures to catch up with rapid technological and economic changes. The T.C. must be structured to provide for a research capability which from time to time will evaluate the performance of the regulatory process and measure its effectiveness. The T.C. should have some representation drawn from industry other than telecommunications who can develop incentive regulatory techniques designed to encourage efficiency and innovation with due consideration given to the role of profits as an incentive.

All Commissioners should be elected or appointed on the basis of the high quality of their professional training, background or experience. No Commissioner should be elected or appointed as a result of political connection or consideration. Removal from office should exist only for "just cause" defined as neglect of duty, misconduct in office, incompetence and malfeasance. Tenure of Commissioners should be for life with compulsory retirement at a fixed age.

Commission staff should be small and manageable. Courses of instruction should be available to T.C. staff in regulatory principles and their applications. Parliament must not permit itself to unduly exert restrictive budgetary controls which would prevent the T.C. and staff from discharging its responsibilities.